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EDITOR

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Original Articles

IMPRESSIONS OF EUROPEAN PROCTOLOGY*

LOUIS J. HIRSCHMAN, M. D., F. A. C. S.

DETROIT, MICH.

In former years there was a steady stream of American physicians flowing into European medical centers seeking the latest developments in all branches of medical and surgical science. The World War, necessarily, interfered with post-graduate pilgrimages to Europe and medical practitioners were more or less forced to seek special training in their own country. In other words, they were compelled at least, in medical education, to "See America First."

Certain European medical centers stand out from others in the variety and excellence of clinical teaching available along certain special lines. Vienna, Berlin, Paris, Turin, Berne, Edinburgh, Leeds and London are centers which are most frequently visited by American practitioners who have definite special medical education in mind. From the Proctologist's standpoint, London is the "Mecca" on account of the fact that there are two special hospitals located there devoted exclusively to the treatment of diseases of the colon and rectum.

In a number of the large general hospitals the medical and surgical treatment of diseases of the large and small intestine are treated in separate services. It is an interesting fact, but on the whole a natural development, that all of the leaders in surgery of the intestinal tract, particularly of the colon and rectum, have been evolved from general surgeons. On inquiry, they have unanimously stated that on account of the amount of material presented in their hospital services with its constant effect on their knowledge of proctologic disease and the improvement in their technique they have been forced to limit their work largely to this special field.

St. Mark's Hospital, for the treatment of the diseases of the rectum and colon, is now nearly 100 years old, while Gordon Hospital, while not of such ancient lineage, is also devoted entirely to proctologic work.

The number of patients who consult the clinics at these hospitals is enormous and indicates clearly the desire of the public for specialized attention along this line. Preying upon the credulity of the people are advertising quacks, irregular practitioners and charlatans such as we have unfortunately as well in this country.

State medicine, with its iniquitous panel system in Great Britain, makes for lessened individual interest in the patient and less efficient professional care. The personal contact is practically lost. Patients who are insufficiently cared for soon become disgusted and they become easy prey for the illegitimate and advertising practitioners. After unfortunate experiences in this regard, they flock to the special clinics devoted to proctology and form a not inconsiderable proportion of the patients treated.

European patients, as is well known are much more easily controlled in the clinics and hospitals, therefore, various methods of treatment can be completely carried out and more definite deductions made therefrom.

On account of the well known conservatism of the British professional men, many of the advances and refinements in the specialty of Proctology have been very slowly and sparingly adopted. This fact is one of the most striking things with which the American Proctologist comes in contact.

General Anesthesia is used almost universally and chloroform fully as often, if not more so, than ether. Gas and oxygen and spinal anesthesia have begun to be employed in a few of the clinics since the war, while local anesthesia is used only recently and by some of the younger men who have seen its use principally by American and French surgeons in army hospitals.

Two years ago the author was honored by an invitation to address the Proctologic Section of the British Medical Association at its session at Newcastle-On-Tyne. At that time the subject of the surgical treatment of internal hemorroids was taken up with special reference

*Presented before Section on Surgery, M. S. M. S., Grand Rapids, September, 1923.

1615

to the use of local anesthesia. A lively discussion ensued and grave doubts were expressed by some of the British surgeons of the possibility of securing anesthesia of the ano-rectal region. But two or three of those present had employed it and only one really understood the technique, but he was enthusiastic.

Various methods of operating for hemorrhoids were discussed and the only thing on which there was an unanimity of opinion was that the Whitehead operation had no place in Proctologic surgery. In fact, the chairman of the section, in his closing remarks made this statement: "Gentlemen, this meeting will go down into history as the time and place at which the obsequies of the Whitehead operation were performed."

Most of the British surgeons are still using the old ligature operation and using linen for the purpose. As a result, they have sloughing discharging wounds with which to deal and prolonged hospitalization and convalescence. A very few still use the clamp and cautery. The excision operation is comparatively new to them but some of the younger men are now using it.

They still use general anesthesia and divulsion for the treatment of fissure and wonder at the occasional case of incontinence following this treatment.

Fistulas, particularly the complete variety, are treated by incision or wide excision and followed until recently, by the persistent packing which so many general surgeons still employ in this country. Recently, however, some of them have begun to see the light and are not packing any longer. American Proctologists ceased packing fistulas over a decade ago, but, as has been said above, our friends across the sea are very slow to change their methods, and especially to adopt ours.

In the treatment of the various infections of the colon, they are using apendicostomy, cecostomy, and colostomy for physiologic rest and irrigation as we are doing in this country. They have many more cases of amoebic dysentery and allied conditions than we do in America as many of their cases have returned from Britain's tropical possessions.

It is in the treatment of cancer of the rectum, sigmoid and colon, that the British proctologist excels. He is far more radical than the American confrere, and his percentage of course after five years is much higher.

On account of the better control over his clinical patients the British proctologist can carry out the indicated measures much better than we can. Practically all of the surgeons who are doing this work are removing the entire colon from the anus upward to eight or more inches beyond the growth in every case of malignancy. There is no thought of preserving the sphincters, and every case must necessarily have a permanent abdominal anus.

The abdomino-perineal operation is used by the majority of surgeons and the Kraske operation has been discarded as was the Whitehead operation for hemorrhoids as dangerous, mutilating and highly unsatisfactory. Most of the surgeons first performed a preliminary colostomy. Where a perineal excision is performed spinal anesthesia is employed in some clinics very successfully. In others, gas oxygen is combined with spinal anesthesia.

The reason given for the sacrifice of the normal anal outlet is the fact that the extension of the malignant process is just as wide in the downward direction as the upward. The sphincter and levator and muscles very soon become involved and are already diseased before any induration can be detected on examination.

The operative mortality following the very extensive operation for excision of colonic cancer in the London Clinics is gradually improving and the number of reports of cures after a five year period is increasing with improved technique. While they have not made the rapid advances in the surgery of hemorrhoids, fistula and fissure, nor have they developed the technique and use of local anesthesia as have the Americans, their work in the surgical treatment of cancer stands out as an example of what specialized surgery in a large special clinic can do. In conjunction with the pre- and post-operative employment of radiotheraphy the prospect of those unfortunates who are afflicted with intestinal cancer, no matter in what part of the bowel the growth is located as a result of the brilliant work of our British colleagues, grows more hopeful.

Our friends across the seas have much to teach us in the study of pathology, bacteriology and their kindred sciences, and in certain branches of surgery they possess world mastery, but in the surgery of the lower bowel especially, until they overcome their natural conservatism, American proctology will continue to excel on account of its simplicity of technique, the American inventive genius and the wide spread recognition in this country of the field of usefulness and the technique of loeal anesthesia.

DISCUSSION

DR. FRANK A. VOTEY, Grand Rapids, Mich.: I think the paper of Dr. Hirschman's is very interesting, especially to us who are doing work in this country which compares very favorably with that abroad. I believe in local anesthesia. There is one trouble I find with my patients, that every patient expects a cure for all time. They may go to an internist and expect to go again and again, but when they go to a proctologist they expect a cure and never to come back. We have got to educate

them to that point of view that we cannot cure them, we cannot make them better than nature made them in he first place.

We are not doing very much in the study of the reflexes of the rectum. I do not think there has been as much done as we should do. From what I read they are not doing so much in the old country. It is certainly interesting to know it is being done.

DR. L. J. HIRSCHMAN, Detroit, Mich., (closing): I did not really expect any one to discuss the paper. It is really needed because so many people who wish to take up post-graduate work ask me what they are doing abroad. Dr. Votey brought up the point about the dissatisfaction among the people in proctologic work. I did not quite get his point because I think a patient cured from any operation is cured and there is no cause for him to come back. I understand things might be a very little different in this part of the state because the propaganda has gone out among some people that every patient who is treated by a proctologist must be guaranteed a cure for the rest of his life. I think this specialty the prospect of cure is as high as in any other specialty except where the diseased tissue has been removed and cannot come back.

As far as the reflex is concerned, that is something that every one is working on.

THE VALUE OF ENTEROSTOMY

C. D. BROOKS, M. D., and W. R. CLINTON

DETROIT, MICH.

In cases of post-operative ileus, in late cases of intestinal obstruction, and also at the time of resection of small or large intestine, enterostomy is a life-saving and rational procedure.

This procedure was first successfully employed by Naleton, in 1858. The old procedure was to open the first distended loop which presented in the incision.

Victor Bonney first selected the jejunum for the site of an enterostomy, as the upper jejunum contains the highly toxic fluid. This has been verified by a number of investigators.

Technic—The location of the enterostomy is selected according to the demands of the case in hand. A point is selected on the wall of the intestine opposite the mesenteric attachment. The loop is emptied and rubber clamps or gauze pads are applied, in order to diminish the fecal content. A fine purse-string catgut suture is inserted, the bowel punctured, a No. 8 to No. 12 rubber catheter with several fenestrations in the side is inserted into the lumen, purse string tied, and the suture is passed through the tube, tied and cut. The catheter is depressed along the long axis of the bowel, and three to five Lambert sutures are placed over the tube, uniting the serous surfaces over it. The depression of the tube into the bowel wall for an inch to an inch and a half insures against leakage and future fistula. After completion of the enterostomy, the catheter is drawn out through an opening in the omentum. The catheter may be opened at will, and should be irigated every one to two hours, to be sure that it is patent. The cat-gut sutures usually absorb, in from five to eight days, and the catheter can be easily withdrawn.

Perhaps enterostomy is performed more frequently in cases of malignancy of the large bowel, than for any other class of cases. It can be performed as a preliminary step to a resection or an anastamosis, or may be performed as a safety-valve above the site of anastamosis. This diminishes the distension, nausea and vomiting, following the paresis of the intestine at the site of anastamosis. The enterostomy may be used for both drainage and nutritional purposes. At this time I wish to cite the case of Mr. C, age 35, diagnosis August, 1917, adeno-carcinoma of the splenic flexure of the colon with marked obstruction. We performed cecostomy, 10 days later, resection of the splenic flexure and a lateral anastamosis of the transverse colon with the descending colon, and after a period of two weeks closed the cecostomy. Examination of this man September 5, 1923, showed him to be in very good health. Bismuth enema showed practically normal contour and no dilatation or retention and no organic lesion of the large intestine.

In post-operative obstruction and in cases of paralytic ileus, we have all seen the beneficial results of early enterostomy. If, after repeated emptying of the stomach and one or two high enemas we have persistent distention of the abdomen, we believe that enterostomy is indicated. The former incision may be opened, and if the patient is in fair condition, some of the adhesons may be freed, and enterostomy performed. It may be necessary to open two or more loops of intestine in order to obtain one that will function permanently. In later cases it is often advisable to perform a high jejunostomy through a separate incision, under local anesthesia. These patients should then receive large quantities of saline, interstitially, and sufficient doses of morphine to keep the patient very quiet. The stomach should also be emptied every two or three hours regardless of nausea or vomiting.

Let us digress for a few minutes and look back to the early days of operations for appendicitis. Most of the patients who survived the attack developed an abscess in the lower right quadrant. This abscess was drained by the surgeon, and many cases developed fecal fistulas while many made good recoveries.

Surgery and diagnosis of appendicitis progressed, and most surgeons then began to search for and remove the gangrenous appendix and drain the abdominal cavity. Sometimes the

bases of the appendixes were ligated and sometimes inverted. Some of these cases after two or three days of rather stormy convalesence, attended by pain, distention, nausea and vomiting developed a fecal fistula, in other words the ligature at the base of the appendix gave way and immediately the surgeon felt relieved, as the patient would probably recover.

Here we wish to suggest, and for the last few years have practiced, cecostomy in the gangrenous cases with peritonitis. We remove the appendix in the usual manner, and insert a catheter with two or more fenestrations, into the cecum, place two purse-string sutures above the base, and invert the stump and tube the same as in a cholecystostomy. If we find at the time of operation diffuse peritonitis, with the resulting distention of the small intestine, or plastic exudate between the loop of the intestine we do an enterostomy in the ileum as well. If possible we bring the ileal tube through an opening in the omentum.

The abdominal cavity is drained in the usual manner. All cases in which we have performed enterostomy receive a small daily enema to safeguard sedementation and impaction in the lower bowel.

In cases of intestinal obstruction due to volvulus, adhesive bands, foreign bodies, or tumors of the small intestine, when the obstruction is relieved, and we find that the intestine is markedly distended and atonic, or if a resection is necessary, we make a practice of doing an enterostomy. In this connection I would like to report the case of Mr. S., 26 years old, who was wounded in France and had an exploratory left abdominal incision, and then a left nephrectomy. He came to Harper Hospital September 26, 1922, four days after the onset of symptoms of acute intestinal obstruction. We performed a laparotomy and freed the adhesions of three loops of bowel, from the whole length of the former incision. We did three enterostomies, needless to say that he was very ill for the next 10 days, and his recovery was doubtful. He received 17 hypodermoclyces, totaling 35,000 cc's of saline, he had 24 gastric lavages. Two weeks later we closed the one remaining fecal fistula, and he went on to good recovery. We would also like to mention a case of hyperplastic tuberculosis of the ileum, with acute obstruction. We performed resection, end to end anastamosis, and ileoostomy above the site of anastamosis, and this patient's fistula closed three days after removal of the enterostomy tube. She has made a very good recovery.

Many cases of inoperable carcinoma of the rectum and sigmoid can be relieved and made much more comfortable and their lives considerably lengthened by suitable enterostomy and treatment of the local growth with radium followed by deep X-ray theraphy.

Summary of cases on whom we performed enterostomy, 1920 to August 31, 1923:

Post-operative Peritonitis and Ileus:
- Total No. of cases 15
- Recoveries 7

General Peritonitis secondary to Appendicitis:
- Total No. of cases 27
- Recoveries 17

Intestinal obstruction:

(a) Volvulus, Bands, Tumors, etc.:
- Traumatic No. of cases 13
- Recoveries 8

(b) Carcinoma of Large Intestine:
- Total No. of cases 5
- Recoveries 2

CONCLUSIONS

1. That enterostomy as preliminary step to or at the time of resection of large or small intestine is rational procedure.
2. That early diagnosis and enterostomy in post-operative peritonitis and ileus will save at least 50 per cent of these patients who would otherwise succumb.
3. Suggest cecostomy and enterostomy in late appendix cases with peritonitis, at the time of primary operation.
4. The majority of enterostomies by Wietzel Method will heal automatically.

Collective papers of the Mayo Clinic, 1922. Articles by C. H. Mayo, E. Starr Judd, and H. W. Rankin.

REPORT OF A CASE OF HENOCH'S PURPURA*

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DETROIT, MICH.

I have for presentation a case of Henoch's purpura which has recently come under my observation.

Henoch first described this disease in detail in 1874, and Osler in 1914 has summarized oue knowledge of the up to date.

The etiology of the condition is entirely unknown, but from its frequent association with anaphylactic and infectious phenomena these are generally assumed to be causative factors. Whether the lesions are produced by changes in the blood vessel walls from toxic causes, or whether mechanical factors are responsible for the exudations, is not known. The coagulatory properties of the blood, including the platelets, are normal, as distinct from the picture in purpura hemorrhagica. In addition to the lesions in the skin, viscera, eyes, and nervous system found in other types of

*Presented before Section on Pediatrics, M. S. M. S., Grand Rapids, September, 1923.

idiopathic purpura, gastro-intestinal crises are an outstanding feature of the type under discussion.

The skin manifestation are of four types: first, purpura, which may vary widely in its appearance and distribution; second, urticarial wheals and swellings; third, erythema of various forms, including erythema multiforme; and fourth, areas of necrosis. It is typical of the symptoms to recur at irregular intervals over periods of months or years, and to vary in their morphology in different attacks.

Visceral lesions are due either to the formation of exudates in some organ or to inflammatory phenomena such as, nephritis, endocarditis, pleurisy, pericarditis, etc.

The gastro-intestinal crises are marked by attacks of colic which may occur at intervals over a period of years, with or without skin manifestations. Osler gives the following description of the attacks, "They may be transient, lasting only a few minutes, but recurring several times during the course of the day. They may be of great severity, causing the patient to writhe in bed. They occur most frequently at night. The attacks are independent of diet. In protracted cases the colic may not appear for a couple months and then be very severe. The position of the pain is usually central, and may radiate to all parts. Very often the child can not locate it accurately. The abdomen is usually flat, not tender, and without muscle spasm, although there may be some tenderness along the transverse colon.

Vomiting is frequently associated with the pain, and may be severe enough to cause bleeding. In some cases vomiting is the chief symptom.

Diarrhea is less common but may be severe and almost entirely bloody. Such cases when associated with colic and vomiting may be very difficult to distinguish from intusseption.

CASE REPORT

The case which I have to present is that of a female child who was born in January, 1919, and who is now four and one-half years old. She has been under my observation for a little over two years. The family history contains nothing of interest except that an older sister died of tubercular meningitis three years ago. There is one child younger who is well. She was born normally at full term, but had an occult spina bifida which resulted in clubbing of the left foot and some sphincter weakness. Her early feeding was very difficult and at one year she was very small, under weight and blue. She has always had an ungovernorable temper and has frequent tantrums and irrational outbursts.

In May, 1922, the patient had an attack of acute pyelitis. While recovering from this she was taken with measles followed by a severe recrudescence of the pyelitis. The pyelitis did not respond to treatment, the temperature became septic, and tenderness appeared over the right kidney region. In the middle of June, 1922, Dr. Plaggemeyer removed the right kidney, which at operation was a mass of abscesses. She made a good recovery from this operation and has had a normal urine ever since. The function of the remaining kidney is good, as indicated by the usual functional tests.

In August, 1922, she had her tonsils removed and, following this, was well until January 1, 1923. When seen at that time her parents stated that she had been having unexplained fever for about one week. The temperature rose to about 99.8 by mouth every day, but there were no other symptoms aside from irritability and poor appetite. An exhaustive examination at this time revealed nothing except a pericardial effusion of moderate degree. This diagnosis was confirmed by X-ray as well as by clinical examination. After three weeks in bed this had disappeared and the temperature became normal. From this time until June of this year nothing of importance occurred. The patient gained steadily in weight, had a good appetite, and seemed to be quite a normal child except for the occasional attacks of temper referred to above. It is, however, to be noted that evanescent blotchy erythematous patches have frequently been observed on her face and neck for some time, but until recently had not been taken as indicative of anything.

She was seen on June 20 with an attack of high fever and a rash resembling rubella. These symptoms disappeared over night and she left a day or two later for the north. Soon after arriving there, black and blue spots appeared on various portions of her body, especially on the extremities and back and about the wound from her kidney operation. Her temperature again became elevated, running from normal to 100, but never being normal in the later part of the day. Fresh purpuric spots appeared nearly every day for about three weeks. They then ceased to appear and gradually cleared up. The temperature, however, has remained elevated throughout. During this purpuric attack she was eating and sleeping well, and aside from being somewhat pale and lacking in energy, she seemed well.

About ten days after the purpura had disappeared she awakened from her sleep one night, screaming with abdominal pain. This attack lasted for over an hour and nothing could be done to relieve it. A physician who saw the child during this attack, could find no cause for the pain. Following this, milder, similar ones occurred every few days until early in August, when she again had a violent attack, which lasted nearly all night. This caused them to return to Detroit, where they again came under direct observation. Since then she has been seen in one attack and there have been a few mild ones which have not been observed. The attack seen came on about one-half hour after going to bed. It was not in any way related to her diet or the condition of her bowels. The pain was located between the umbilicus and the pubes. The abdomen was flat, and there was no evidence of tenderness or muscle spasm. Vomiting occurred at the height of the attack.

Since then we have completely examined the patient from every point of view. Tuberculosis has been ruled out by repeated skin tests, X-ray, absence of physical signs, and by the fact that the patient gains steadily in weight in spite of the continued fever. The blood shows normal coagulatory properties, but the white cells number between twelve and thirteen thousand with a preponderance of lymphocytes and a basophilia of 8 per cent. The Wassermann reaction has twice been negative. The Widal tests were all negative and a blood culture showed no growth after five days. A complete stool examination the morning after a severe at-

tack showed nothing abnormal. The urine has been normal on frequent examination.

In considering the case and looking back over the history, I have made a diagnosis of Henoch's purpura and feel that the attack of pericarditis last winter and the blochy erythema that has been observed from time to time, were probably early manifestations of this condition. Certainly the nervous symptoms which the child presents are in accord with those frequently described as being associated with this disease. I have also wondered whether or not the kidney lesion a year ago might not have been associated with this trouble either as cause or effect.

The patient has had no symptoms now for about two weeks. She is receiving no treatment, gets a full diet, and is permitted moderate exercise.

The prognosis is of course guarded, our chief fear being the development of a serious visceral lesion, particularly of the single remaining kidney.

THE TREATMENT OF ACUTE VOMITING IN INFANTS AND CHILDREN

DAVID J. LEVY, M. D.
DETROIT, MICH.

Vomiting is one of the most frequent and annoying symptoms encountered in infancy and childhood, and at the same time, one most likely to be followed by serious consequences. The immediate effects of severe or uncontrolled vomiting are starvation, acidosis and dehydration. A prolonged hunger period in infancy is always undesirable and in undernourished infants a source of danger. A rational therapy of vomiting then, involves the reduction to a minimum of the hunger period, the offsetting or neutralizing of acidosis, and the prevention or compensation of the loss of water from the tissues. It is the object of this paper briefly to discuss measures directed to these ends, avoiding, however, the discussion of the control of such etiological factors as cerebral or meningeal irritation, gastric or intestinal obstruction, etc.

In mild instances of vomiting due to obvious dietary fault, the removal of the cause and the restriction of the diet to skimmed milk or thick gruel, or both, for a brief period, ordinarily suffices. Eliminatory measures should be limited to a simple enema or, if tolerated, to a moderate dose of milk of magnesia. Active purguration by such drugs as castor oil—which is tolerated poorly enough by a normally behaving stomach and often induces vomiting in a healthy child—is distinctly contraindicated, as is most assuredly the other frequently used cathartic—calomel. Not only may these agents serve as further gastric irritants, but by the production of watery stools, initiate or increase the untoward condition of dehydration. As a routine procedure then in acute vomiting—provided careful abdominal palpation has eliminated appendicitis as the causative factor—a simple enema may be employed, and other than mild catharsis is distinctly to be avoided.

Within recent years, Sauer, Langley Porter, Mixsell, the writer and others have advocated the use of thick cereal gruels in the non-surgical treatment of pyloric obstruction, and a therapy based on the methods therein involved has proven highly satisfactory in the treatment of the acute vomiting, in general, of infants and children. Briefly, the method is one of administration of thick gruel with definite sugar admixture, beginning with frequent small quantities and increasing gradually and according to indications, both the quantity and the interval.

A thick gruel is prepared of the following:

Skimmed milk, 8 ounces
Water, 8 ounces
Farina, 3 tablespoonfuls
Granulated sugar, 2 tablespoonfuls

and is cooked in a double boiler for one hour. This formula is merely illustrative and various modifications may be employed. The vomiting child is administered one teaspoonful of the mixture and if retained, a half hour is allowed to elapse and another teaspoonful is given him. If this is retained, after a further period of one hour, a tablespoonful is offered and at the end of another hour, an ounce. After a further period of two hours, provided these previous quantities have not been vomited, two ounces are administered and, after another interval of three hours, three ounces are given. As vomiting ceases, certain of the gruel feedings are replaced by increasing quantities of boiled skimmed milk which serves as an intermediate step to the resuming of the child's normal regimen. With older children skimmed milk also, and thin strips of stale bread well toasted, with tea or broth, may serve as intermediate measures toward resuming the normal diet.

If, after administering the gruel the vomiting persists or recurs, a variable interval is allowed to elapse and the feeding is resumed again as at the outset, beginning with one teaspoonful or more according to the indication. If the vomiting continues to persist, it is well to wait then until all vomiting has ceased, avoiding any fluid or feeding by mouth, introducing fluid only by the routes to be discussed. When the stomach has been quiescent for six hours the procedure may be begun again. In the major-

*Read before Section on Pediatrics, M. S. M. S., Grand Rapids, September, 1923.

ity of instances after a rest of this duration, the condition is susceptible of control and further delay, which may be harmful, should be avoided.

At the same time that the gruel is being administered, a sugar solution is prepared, approximately 5 per cent in strength. For practical purposes, one may tell the mother to add three teaspoonfuls of granulated sugar to a glass of water. The child is allowed to sip this sugar solution or drink it as freely as the condition of his stomach permits. At the same time, a counter irritant may be applied to the stomach region in the form of a small hot mustard paste which is allowed to remain only long enough to produce reddening of the skin.

If the sugar solution is not retained by mouth or if the water loss is extensive, the fluid may be administered by rectum, intravenously, subcutaneously or intraperitoneally. May I suggest that the Murphy drip is often a source of irritation to the child and often difficult to the attendants. I have found it preferable to instill into the child's rectum, an ounce of a 5 per cent solution every hour by means of a funnel and a No. 14 or16F catheter, employing 10 minutes for the administration of this quantity. This ordinarily results in retention without producing irritation of the bowel. While ordinarily the subcutaneously injected fluid may consist of a saline solution, still one may add glucose to the fluid with beneficial effects. Only under few other circumstances does one encounter more pronounced and sudden water loss from the tissues than in the case of acute vomiting. The result of a single administration of subcutaneous fluid in severe vomiting cases is often striking, and in many instances, the turning point toward recovery of the child seems to date from this procedure. In cases of exceptional severity, where the acidosis is extreme, recourse may be had to intravenous administration of the fluid. This is often a difficult and sometimes a severe procedure and fortunately is necessary only in a small percentage of cases. Where the technical difficulty of intravenous administration is insurmountable, the intraperitoneal route may be employed. Although I believe that the first enthusiasm with which the intraperitoneal route in the administration of fluids to infants and young children was received, is properly being replaced by a certain degree of conservatism, still this method of procedure is valuable and should be employed as a life saving measure where indicated.

The rationale of the foregoing is obvious. In the first place, one starts in immediately with the administration of small quantities of food, thereby minimizing the starvation period which is so consequential in many instances. One proceeds on the principle that it is better for the patient to receive a small quantity of food and retain it than to receive a larger quantity of food and lose it. The thick gruel forms a colloidal mass in the stomach and tends, by virtue of this property, to protect the gastric mucosa. The carbohydrate has a direct action in offsetting the existing or imminent acidosis, aiding in the meanwhile, the water retention in the tissues which latter action is supplemented by the administration of a carbohydrate solution by one of the procedures heretofore suggested.

The method which I am here briefly outlining and advocating includes the avoidance of drugs by mouth except where special indications exist, and notably among the drugs excluded is sodium bicarbonate. It is questionable if sodium bicarbonate has the effect attributed to it, and if its exhibition may not be attended by untoward results. Certainly in routine cases, its employment may be dispensed with and the desired end accomplished by glucose administration. I have seen several instances of grave symptoms, including cyanosis, air hunger and carpopedal spasm, which I have attributed to over-alkalinization with the bicarbonate. If the latter is used, the quantity to be given should be definitely controlled by testing the reaction of the urine, to prevent over-dosage with resultant alkalosis.

Where persistent vomiting or ineffectual retching occurs, lavage of the stomach with a saline or mildly alkaline solution may be advantageously employed. This procedure, while simple, is only infrequently, however, necessary.

In the case of acute vomiting in the breast fed infant, it frequently is necessary only to reduce the length of the feeding and maybe to replace two or more of the feedings with small quantities of thick gruel. At times it is necessary to reduce the quantity of milk more decidedly and to proceed with smaller and gradually increasing measured doses of breast milk. Sugar solutions should be administered by mouth, and if severe effects of the vomiting are present, such further procedures are indicated, as in the case of artificially fed infants.

When vomiting is accompanied by diarrhoea, the use of gruel and the oral and rectal administration of sugar solutions, is inapplicable. In such instances, however, one employs undiluted boiled skimmed milk and proceeds with the administration of small doses, beginning as with the cereal, with one dram, gradually increasing the quantity and the interval precisely as in the case of the gruel administration. Here one must proceed cautiously, if at all, with sugar solutions by mouth. The rectal

route, of course, is excluded, and if acidosis or dehydration are present or at all imminent, one of the other routes suggested, should forthwith be employed.

Numerous methods exist for the treatment of acute vomiting. The foregoing is outlined merely as embodying the several principles which should form the basis of any rational therapy—(a) the avoidance of an unnecessarily prolonged hunger period; (b) the administration of carbohydrates; (c) the avoidance of irritating and dehydrating cathartics; (d) the replacement of the fluid loss of the body tissues; and (e) the non use, or discrete use, of sodium bicarbonate.

DISCUSSION

DR. HESS: I would like to ask Dr. Levy about the use of atropin in some of these cases.

I think this is a very instructive paper, but there is one point the doctor did not bring out that I had thought of, and I think we must not forget, viz., the environment of the baby. So commonly we find a child about four months of age, on the breast, and the mother commences to menstruate. No one knows what happens to her milk during the first two or there days of menstruation; but we do know that the baby commences to cry a great deal. Consequently the mother begins to rock, wheel, and shimmy with this baby and it is put through all kinds of physical gymnastics and in a day or two the baby begins to vomit; the more it vomits the hungrier it gets; the hungrier it gets the more crying it does and the more crying it does the more rocking it gets. Then you have the vicious circle. A consideration of the environment of the baby would indicate that a little physical rest will often stop vomiting without any medical treatment.

DR. KAY: There are two points upon which I should like to offer very hearty concurrence with the opinion of Dr. Levy. One is the administration of glucose solution by injection in doses of an ounce or two ounces at intervals of one to two hours. I have entirely discarded the use of the Murphy drip. The ease of administration of a dose of an ounce or two ounces at one injection, every hour or two hours, I think greatly recommends itself.

The other point is the use of a lavage. In hospital service where one sees rather a large number of cases, they must be struck by the ease with which a lavage can be done and the efficacy of the procedure.

Just one other point I would like to touch upon—I don't know whether Dr. Levy has said anything about it because I did not hear all that he said—that is the curing of babies of vomiting by the administration of a certain drug which was brought to our attention by Dr. Marfan, the French discoverer. The administration of mercury stops babies from vomiting who cannot be stopped in any other way. He very conclusively showed that persistent vomiters can be stopped.

DR. KEMPTON: We always enjoy Dr. Levy's contributions to our Society because he always has something practical to give us. I am wondering if he would tell us what his experience has been in the use of Dryco, or dry milk, in vomiting babies, especially after the acute symptoms have been taken care of by his carbohydrates.

DR. MINER: I should like to enquire regarding the use of albumen milk or lactic acid milk .

DR. LEVY (closing): In regard to the use of albumen milk and lactic acid milk, I think they both are distinctly indicated in cases where diarrhoea accompanies the vomiting. So far as their employment in simple vomiting cases, without diarrhoea, I doubt if they have any added advantage. Where the other condition exists, however, and one wants to influence the intestinal flora to bring about the constipating effect of the protein substance, certainly albumen milk or lactic acid milk would have a decided indication and would probably be preferable to the plain skimmed milk.

In regard to the use of atropin, I have not used it in vomiting cases at all, and I tried to make the point in this paper that it was desirable in vomiting cases to avoid the use of drugs. I did at one time, however, use novocain in the vomiting due to pyloric spasms; but two years ago I ran across a case of an infant with an idiosyncracy, apparently, against novocain and the child very nearly died under its administration. At any rate, the condition was very alarming, and I discontinued the use of novocain in that class of cases, and I don't know but what the cases get along fully as well without it.

As I say, atropin might be indicated in spastic cases of vomiting due to pyloric spasm, or pyloric stenosis, but I believe in acute cases drugs are not retained in sufficient quantities or in a sufficient degree, rather, to produce the local effect which is necessary for their physiological action. I have had no experience whatsoever with the use of mercury in these cases.

ACRODYNIA*

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The writer is aware of the probable inaccuracy of this title for the disease syndrome under discussion. But, as this term is used in over half the references encountered, and as no unanimity is found among the other writers as to a proper designation, it may be well to call the disease "Acrodynia" until more is known of its true etiology and pathology, when the proper term will be forthcoming. Other names used are "The Pink Disease," "Beef Hands and Feet," "Erythroedema," "Pellagra - Acrodynia(?)," "Dermato-Polynsuritis" and "Polyneuritis Affection Resembling Acrodynia."

HISTORY

In April, 1920, a paper (1) was read by Dr. Wm. Weston, of Columbia, S. C., before the Pediatric Section of the American Medical Association at New Orleans, describing, for the first time in this country, a disease occurring in infants and young children, under title of Acrodynia. The paper was based on a series of eight case histories, written by Dr. Jos. B. Bilderback of Portland, Ore. (to whom belongs the credit of first describing the disease in this country) which were sent to Dr. John Lovett Morse, of Boston, for diagnosis. Dr. Morse, thinking the cases suggested Pellagra, referred them to Dr. Weston. To me, this is significant as indicating that up to that time the disease

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had not been recognized or described in this country.

Dr. Weston and Dr. Babcock, an authority on Pellagra, concluded that the disease was not Pellagra and considered it as most suggestive of the Paris epidemic of Acrodynia observed in 1828 to 1830. This epidemic, termed Acrodynia (painful extremities) by Chardon, attacked some 40,000 people, mainly adults, ran an a-febrile course (as a rule) of from two to four weeks, in a few cases recurring a second time. Prominent symptoms were dermatoses, especially of the palms and soles, all manner of paresthesias, acute gastro-intestinal disorders, paralyses and pareses of lower extremities and, in some, spasticities, and general anasarca. Two views are held as to the etiology of this epidemic, one, that it was a post-influenzal affection, following the pandemic which had swept the world a year or two previously; the other, that it was arsenical poisoning caused by the employment of preparations of arsenic to destroy parasites infesting the grapevines.

The next series of cases in American literature were reported in a paper by Dr. Albert H. Byfield from Dept. Pediatrics State University, Iowa, (2) in November, 1920, under title of "A Polyneuritic Syndrome Resembling Pellagra-Acrodynia(?) seen in Very Young Children." Seventeen cases are described in detail, and 13 cases occurring in Cincinnati, and sporadic cases from Omaha, Chicago, Des Moines and Detroit are referred to.

Dr. Byfield's summary of the clinical picture is as follows:

The disease picture was a complex one, the nervous system and the skin being most involved, while the respiratory tract and the digestive tract appeared to be less affected. On the part of the nervous system the changes were chiefly sensory or trophic in character. Alopecia, pulling out of the hair (trichotillomania), falling out of the teeth with only slight involvement of the gums; photophobia, and in one case double neurokeratitis; changes in the nails, and reddening of the tongue were seen. Paresthesia of the toes and feet, and of the fingers and hands was another constant and often most distressing symptom, leading the children to rub, scratch, and even chew the extremities. A diminution in cutaneous sensibility to pin-pricks was made out in some cases, but this seemed not to be a constant finding, due possibly to the difficulty of making accurate observations in individuals so young.

The reflexes were diminished in almost all cases, absent or increased in some; but the severity of the disease and the degree of loss of reflexes did not necessarily coincide. In most severe and even in the mild ones dullness and apathy, alternating with extreme restlessness and sleeplessness, and in one instance, delirium were observed. In a clear-cut case the patient would often adopt a characteristic posture, either lying on the side, rubbing the hands or feet, or crouching with the head burrowed into the pillow. In a few instances seen by me has a clinical picture of such intense wretchedness been presented.

Brown-Courtney-MacLachlan (3) include affections of the respiratory tract and Zahorsky (4) the "change in disposition and activity," among the general characteristics of the disease.

During 1921 five cases were reported by J. Cartin (5), one by Emerson (6), eight by Brown-Courtney-MacLachlan (3) in this country, and 88 by Wood (7), occurring in Australia.

Among cases reported the following year, 1922, are, one by Field (8), two by Vipond (9), one by C. M. Davis (10), two by L. N. Linsay (11), 14 by Zahorsky (4), one by L. Porter (12), and two by Giffen (13) in America, and one by F. Parks Weber (14), and one by H. Thursfield (15) in England.

DIAGNOSIS

This is easy in well marked, fully developed cases, if one has the disease in mind, but in the early stages certainly would be difficullt and often impossible.

In studying the published case-histories, one is struck by the long duration of the illness prior to coming under observation of the writers. In Byfield's series, for instance, the average duration being three and one-half months, with extremes of one to six months.

The early symptoms are the more or less gradual onset of irritability, restlessness, sleeplessness, loss of appetite, strength and weight. But how often this symptom group is due to other causes, such as intestinal indigestion, post-nasal infection, otitis, faulty training, effort syndrome, pyruia or bacilluria, etc.? No laboratory work has been done at this stage and whether it would guide us other than by excluding some of the above named conditions, is a question. "Grippy" catarrhal symptoms at the outset are frequent and the rectal temperature generally about 100, though it may be considerably higher. The undue duration and steady increase in severity of the above symptoms should arouse our suspicions.

From two to three weeks, up to five months, after the onset of the fretfulness, the redness, coldness, and swelling of the hands and feet appear; the anorexia, loss of strength and wasting become marked and sweats occur; the child rubs, scratches or claws at hands, feet, or general body surface, often shuns the light (burrowing head into pillow or on mother's shoulder), stops walking or sitting up, does not smile and resents attempts to amuse him, may pull at hair and teeth may loosen or fall out. A more or less generalized body rash, resembling heat rash, may come and go. Some cases show changed reflexes, enythematous lesions of nose or cheeks, deep abscess, or bullae.

DIFFERENTIAL DIAGNOSIS

From Pellagra—By the gradual shading off of affected skin into healthy skin instead of a sharp line of demarcation, as found in pellagra; by the lesions being more marked on the palmer and planter surfaces, with no scaliness on the back of neck; by its occurrence, in some instances, in breast babies; by the absence in the history of any common dietetic factor; by the aggravation of symptoms in cold weather and no recurrence in cured cases; and by the prolonged duration of subjective symptoms, up to eight months. (Byfield.)

From Arsenic Poisoning—By lack of prolonged marked irritative gastro-intestinal symptoms and absence of arsenic in the urine.

From Post Diptheritis Paralysis—By the preponderance of sensory disturbances and the absence of characteristic motor paralyses.

From Acroparesthesia—By occurring in infants and young children instead of in adults (usually women between 30 and 40 years of age); also, by the redness rather than the paleness of the fingers and toes.

From Erythromelalgis—Which occurs from puberty upwards, and in which the general nutrition and health is not interfered with, the hands and feet are tender, and symptoms are aggravated by warmth.

From Epidemic Encephalitis—By less severe nerve and cerebral disturbances, and no sequellae in cured cases.

PATHOLOGY

Little is known. Post-mortem reports by Thursfield and Australian physicians throw little light on the nature or cause of the disease. The reports seen, however, do not state whether microscopic studies of the nervous systems were made. Byfield, in a case complicated by Pulmonary Tuberculosis, found "involvement of an occasional anterior horn cell, gliosis about the central canal, and edema of the sensory roots."

The blood and spinal fluid have uniformly been Wassermann negative; a leucocytosis of 12,000 to 30,000 has been found in all marked cases and both a moderate anemia and a polycythemia have been reported. The urine has shown an occasional trace of albumen and quite often an increased number of leucocytes, the latter never appearing to have an etiological relation to the disease. In metabolic studies, made by Brown-Courtney-MacLachlan, an excessive loss of nitrogen through the urine and a negative nitrogen balance, and, in one, a negative balance of bases, were found.

Vipond (9) states that a "general enlargement of all the glands of the body" occurs, but this has not been noted by other observers nor was it true in the cases herein reported. He states that by aspirating an enlarged gland and inoculating a culture tube of fresh blood-serum, he secured a growth of Gram-positive diplococci, from which a vaccine was made that accomplished a rapid cure in his two cases.

ETIOLOGY

Weston and others regard it as a deficiency disease, from its behavior in many respects like pellagra and scurvey, while Byfield leans to the opinion that it is of infectious origin, the view held by Brown-Courtney-MacLachlan, Field and others. In all of the cases to be reported the disease began with head colds or cough, at a time when we were seeing so many cases of so-called Influenza. In some of Byfield's cases, and in one of the writer's, marked improvement followed removal of foci of infection from throat and nose. The thought that an infection causes the early prolonged symptoms, during which little food of any kind is taken for weeks or months, resulting either in a deficiency disease alone, or, in a lowered state of nutrition making the nerve structures more vulnerable to toxines of infections, seemed plausible to me until cases were encountered in which the food intake was little affected. It is logical to expect that when the etiology is definitely ascertained it will be made clear why these cases occur rarely (16) after six years of age. May I suggest that possibly some as yet unidentified deficiency, either of food element or internal secretion, exists in certain children up to about the sixth year, when it is outgrown; and, that some infection in this group of children causes the syndrome called Acrodynia.

PROGNOSIS

In the great majority of cases, favorable as to ultimate complete recovery, but frequently dragging along for from four to eight months with periods of partial remission alternating with exacerbation.

However, in 91 cases collected by Wood and Cole in Australia, there were five deaths; in Byfield's series of 17, three deaths; in Zahorsky's series, two deaths; C. M. Davis, one death —all due to complications, pneumonia being the most frequent.

TREATMENT

Is supportive and symptomatic and may be summarized as follows:

(1) Local applications to allay the intolerable skin irritation; drugs, when needed, to promote sleep and rest, and as tonics.

(2) Removal of any foci of infection, when indicated.

(3) General hygienic measures—sun-light, fresh air, complete diet, forced feeding if necessary.

(4) Possibly, administration of vaccines made from gland puncture, as advocated by Vipond.

CASE REPORTS

Case 1.—Male infant; age fourteen and one-half months. First seen June 7, 1922.

First child; birth normal; birth weight about nine pounds.

Diet—Breast, eleven and one-half months; at ten months began to add pasteurized milk, cereals, breadstuffs and orange juice to diet.

Contagion and past illness—none.

Present illness—Began eight weeks ago (first week of April, 1922), with a "cold in the head," since which has been dopey and whiney, has eaten little, been very irritable, restless and sleepless at night, and lost weight. Three weeks ago a blotchy red eruption appeared on hands and about four days later on both feet. (Impossible to get any accurate description of this eruption.) Babe would claw at reddened areas of affected skin most of the time. An ointment was ordered by a physician and in a few days the skin on backs of hands began to peel and this extended between the fingers. There also was some peeling about the toes. The hands and feet became swollen, red, cold, and moist, there were frequent sweats, an itchy red rash on the trunk and extremities was more or less constantly present, and the child kept the eyes nearly closed and avoided the light. At present takes only one pint of milk with five tablespoons of malted milk and one-half glass of orange juice daily, refusing all other food. There has been no vomiting or diarrhoea.

Physical Examination—Fairly well nourished male infant, (but skin appears "too large,") shuns the light (buries face on mother's shoulder), and has a very anxious, unhappy and worried facial expression, is very cross and irritable. Temperature 100 (rectal). weight, 20 pounds 2 ounces. Heart action rapid, regular, no murmurs or enlargement. Lungs and abdomen, normal. Cervical and inguinal glands palpable and slightly enlarged. Mouth and throat—tongue coated, ten teeth, no ulcerations, tonsils moderately enlarged and congested, pharynx red and there is a thick purulent discharge on posterior wall. Nose—moderate mucopurulent discharge. Eyes—Kept closed most of the time and turned from the light; pupils equal, moderately dilated and react to light. There is no squint.

Extremities—Feet and lower legs puffy (do not pit), cool, and bluish. Soles of feet are dusky red and there are evidences of peeling, especially between the toes. Hands show a similar condition, though less marked, and a few deep seated small flattened papules are scattered over wrists and dorsi of hands.

Patellar reflex—Left, feeble, and right is absent.

Sensation—Sensitive to pin pricks.

Treatment and Course:

Diet—Milk, 24 ounces; cereals, scraped beef with bread crumbs and beef juice, egg, green vegetable mash, broth as an appetizer, whole wheat bread and butter, apple sauce and orange juice.

Medication—Scott's Emulsion (as that was the only form of Cod Liver Oil he would take), two teaspoonfuls t. i. d. Locally, Ung.Zing.Oxid. with 1 per cent Phenol and Menthol.

June 11, 1922 (four days later): Eats and sleeps better, scratches less, and keeps eyes open more. There is an indurated fluctuating swelling at base of left great toe, planter surface. Abscess opened by surgeon and large wet boric acid dressing applied.

June 13, 1922—Abscess almost cleared up. Ulceration present on outer aspect of left fourth toe; wet dressing; general condition same.

June 20, 1922—Been very restless and fretful, especially at night, sleeping poorly, and rubbing hands and feet much of the time, until last night, when he slept well. Eating better (takes almost one quart of milk, cereals, and one-half glass of orange juice), and takes plenty of water. Mother states that he urinates but twice in 24 hours, but then q.s. Legs are less swollen, hands and feet less red and warmer. Abscess healed with scab, also ulcer of toe is scabbed. Forearms still a trifle puffy, arms thin, thighs flabby and thin. Weight, 19 pounds 13 ounces. Urine—Ac.-Alb., none; Microscopic, negative. Much quieter baby, but still not normal.

July 7, 1922—Eyes wide open, takes interest in playthings, but is very irritable and fretful during the day. Sleeps well at night and takes two naps a day. Appetite fair but variable. Urinates frequently and grunts and seems distressed while doing so. Urine remains negative. Has been sweating profusely at times. Hands and feet slightly red and warm, legs very little swollen. Weight 19 pounds, 7 ounces.

July 15, 1922—Telephone report: Sleeping better, much less irritable, eating well.

July 25, 1922—Telephone report: (Six weeks since first seen and nearly four months since beginning of illness.) Happy, eating well, getting fat.

Case 2.

Male infant; age, thirteen and three-fourths months. First seen, June 24, 1922.

Second child; sister of three years alive and well; birth normal; birth weight, ten pounds.

Diet—Breast only for ten months, then modified cow's milk as supplemental feeding for one month, during which was uncomfortable and constipated (was always constipated—laxative or suppositary invariably being needed.) Completely weaned at 11 months (when weighed between 22 and 23 pounds), and was put on whole milk, boiled for three minutes, one quart, with six ounces of water and four tablespoons of Dextrimaltose. Orange juice was started at age of one month for constipation.

Previous Illness—Always well, except for chronic constipation, and a happy baby until at the age of about eight and one-half months. January, 1922, had a "cold in the head" and some cough, acute for ten days, then improved, but was droopy and not completely recovered when present illness began.

Present Illness—During February, 1922, while still for the most part on the breast, he became very restless and irritable, slept little during the day and during the night would toss and turn, get on knees, and thrash about. He lost appetite, became weak and limp, and an itchy fine pimply rash appeared on body and extremities. On March 6, 1922, five days after weaning (six weeks after the "cold"), left hand became red, swollen, moist and cool. The other hand and then the feet were similarly affected within a few days. He sweat profusely, and pulled at his hair, at times, and the small papular rash came and went. Condition remained about the same until April 3, 1922, when his physician at that time sent him to a hospital (his mother was worn out with the care and sleepless nights). During the eleven days in hospital, temperature ranged from 98 to 99 4/5, nose and throat were negative for diphtheria, stool analyses showed no excess of free fat, soaps, or starch, and trace of albumen (no pus) was found in the urine. Beside notes speak of: Restlessness, sleeplessness, cold, purplish-red and puffy hands and feet which he was rubbing and scratching much of the time; refusal of food part of the time; profuse sweats; persistent constipation, and slight improvement on discharge. Diagnosis was "Intoxication from Food."

On return home another physician put him on a milk formula for a month and as no permanent improvement followed, took milk away altogether

and gave vegetables, egg, broth, bread and butter, custard, rice, fruit juices and apple sauce. But the baby took little food, rested very little day or night (the only way the mother could quiet him was by rubbing the soles of his feet), the condition of the hands and feet would improve for a few days or a week and then get cold, bluish-red, and swollen again. He would sweat at times and urinate frequently.

Six months after the "cold" and three and one-half months after the hands and feet became affected, the patient came under my observation.

Physical Examination—Pale, thin, flabby male infant, skin hanging in folds, facial expression that of great distress and weariness, attitude of utter fatigue, very irritable, resenting any attempt to amuse him. He constantly rubs at soles of feet. He does not scratch as one suffering from an intense itching, but rubs as though to relieve some less severe irritation, such as a formication or tingling of the skin. Eyes half closed and avoid the light, conjunctivae maderately injected, pupils equal and react to light. There is no nystagmus or squint. Chest normal, abdomen normal, except for masses in region of descending colon thought to be fecal masses. Left patellar reflex active, right feeble. Glands—Cervical, anterior and posterior, moderately enlarged. Mouth and throat—Tongue coated with red edge, twelve teeth, gums in good condition, no stomatitis; pharynx reddened, tonsils small, smooth and congested. Muscles soft and weak. Hands and feet are of a bluish-red color, most marked on palms and soles, slightly swollen (do not pit), and are cold. A number of small papules are present on the feet. There are papulo-erythematose lesions scattered over the wrists, forearms, ankles and lower legs. Scattered over the trunk are fine papular lesions, resembling heat rash.

Urine: Acid—Albumin, very faint trace—Sugar, none—Microscopic, negative.

Stool: Starch, normal—Free fat, normal.

Treatment and Course:

Diet—Lactic acid milk, cereals, vegetable mash, fruit juices, egg, whole wheat bread, butter, scraped beef, baked potato, and stewed fruits.

Syrup of the Iodid of Iron with Cod Liver Oil was ordered internally and Calamin Lotion with Phenol and Menthol locally.

Improvement was gradual, interrupted by periods of exacerbation of all symptoms (mother had to hold in arms and rub feet to induce sleep) and continued until August 1, 1922, when began to have fever, choreiform movements of extremities and head, at intervals and to urinate frequently. He made no attempt to rub at hands or feet, but would dig at body when uncovered. He lost appetite and slight dry cough developed. Seen on August 2, 1922, when temperature was 100, general appearance much improved, hands and feet slightly red, but warm, and presented no lesions nor apparent irritation. Heart and lungs normal. Tonsils congested, posterior pharyngeal wall granular and red, with thick mucopurulent material adherent. Posterior Cervical Glands were moderately enlarged, ears normal. It seemed to me that the child was suffering from a post-nasal infection, the choreiform movements and frequent urination (urine negative) being the result of the toxemia on his nervous system not yet fully stabilized and recovered from the disease under discussion.

August 25, 1922—Both hands and all fingers have been swollen, tense and red, but warm, for past 24 hours, feet normal. Swelling appeared urticarial in form and was thought due to mosquito bites. Bed was screened, Calamin and Zinc lotion applied, and condition promptly cleared.

A moderate "cold" and cough were successfully weathered in October, 1922, without any return of the distressing symptoms. Total duration in this case, between seven and eight months.

Case Three:

Female infant; âge thirteen and three-fourths months.

First seen April 4, 1923.

Third child; other two alive and well; mother had one miscarriage at three months, one year prior to birth of this child; birth normal, weight 9 pounds 14 ounces.

Breast-fed first year and had suffered no previous illness.

Present Illness—Began at one year of age, January 23, 1923, three days after weaning and being put on dilutions of raw cow's milk, when she showed mild catarrhal symptoms, seemed feverish, cried hard much of the time, and was constipated. Was better the following day, but would hold breath after stridulous inspirations and remained very irritable and restless and slept poorly. Two days later a rough, itchy erythematous rash appeared on chest, front and back, and a few "spots" appeared on cheeks. Rash lasted three days. One week later, hands became red and cool and boils developed on thumb and finger. Rash on body recurred and has persisted, off and on, up to present time. Had a cold in the head three weeks ago, since which eyes have been red and sensitive to light. Has been very restless and irritable, sleeping little, scratching body and rubbing and clawing at hands and feet, for past six weeks. There has been more or less peeling of the skin of hands and feet, and constipation most of the time.

Taking 24 to 30 ounces of milk, bread and butter, and cereals up to one week ago, since which about half this amount.

Examination—Weight, 18 pounds 4 ounces, temperature 98 8/10, 8 teeth, all normal. Eyes are turned from light, lids trifle thickened, red, and about one-third closed; pupils react equally to light; there is no squint or nystagmus. Pulls at hair frequently. Underwear is moist. Skin loose and, on trunk and extremities, presents erythematous macular lesions and scratch marks on buttocks and thighs. Tip of nose red. Hands are warm, swollen slightly and reddened with some peeling about digits; feet about same except are cool.

Treatment:

Diet—Consisting of milk, egg, cereals, vegetable mash, scraped beef, stewed fruits and orange and tomato juice; Calamin lotion with Menthol and Phenol, Malt Extract with Cod Liver Oil, and a mixture of Chloral and Sod-Bromide.

Course—For some six weeks child grew worse; grew weaker and was unable to sit up, scratched and rubbed hands and feet a great deal, sweat profusely at intervals, could not stand the light, up every hour at night (at first the chloral and bromide helped, but soon lost its effect), ate little, urinated frequently (crying with the act at times) and hands and feet peeled until raw. The application of raw linseed oil seemed to relieve the itching of hands and feet, and healing occurred shortly.

All symptoms began to improve about May 15, 1923; began walking first week in July. When last seen, August 14, 1923, weighed 21 pounds 4 ounces, had 12 teeth, skin normal, very active and happy.

Duration of illness, about six months.

Case Four:

Female, age 2 years, 1 month, residing on a farm.

First seen May 19, 1923.

Fourth child, others alive and well. Birth normal; birth weight 6½ pounds.

Breast-fed, 1 year, and developed normally. No

history of contagion. Had frequent "colds" and some ear-ache last winter, but ears did not discharge.

Present Illness—Began about middle of March, 1923, with hard cough, cold in head, slight fever and some ear-ache. Cold improved in a few days, but child remained listless and irritable and appetite failed. Two weeks later, April 1, 1923, hands became red, became slightly swollen and blisters became flat pustules. She ate very little, sweat considerably, pulled at hair, cried a great deal, avoided the light, slept poorly, buried face in pillows, and feet became affected, but to less extent than hands. The last of April, 1923, had an attack of measles—another child in the family suffered with measles at the same time. During the second week of May, 1923, the tip of the middle finger began to turn dark.

For past few days has been very feverish, greatly prostrated, taken scarcely any nourishment, urine has been very scanty, but bowels regular.

Examination—Lying on right side, legs drawn up, appears acutely ill, is very restless and irritable by spells. Temperature 104, pulse regular, 60. Skin, of a dusky color, moist and cool, shows a fine papulo-muscular rash distributed over trunk, sparsely on extremities. Over left cubital space is an area, half-dollar in size, of deep induration. Heart shows no murmurs or enlargement. Many moist rales are heard over both lungs and areas of slight dullness are made out over back, both sides. There is practically no cough (also noted by Zahorsky, who attributes it to insentive lung tissue.) The hands and fingers are much swollen, red, hot to the touch and present many flat pustular lesions. The terminal phalanx of the left middle finger is dry, black and cold, with a distinct line of demarkation at distal joint. Feet are red, slightly swollen, few pustules. There is a moderate general gland enlargement. Post-pharyngeal wall is red, granular and covered with muco-purulent material. Tonsils are congested.

Course:

Ran an irregular high temperature with the usual symptoms of a Broncho-pneumonia plus preceding symptoms for some three weeks. Indurated area at bend of left elbow softened and was incised June 6, 1923. Pus was evacuated from as far down as the wrist.

Child slept little (only when hands were rubbed), and was very restless and irritable up to July 1, 1923, though appetite showed some improvement about June 25th.

The latter part of July, 1923, the gangrenous soft tissues separated from terminal phalanx left middle finger, leaving bone exposed. This dropped off at the joint August 1, 1923. About the same time a narrow strip of gangrenous tissue which had formed along outer aspect of left hand and thumb, separated, which on healing, left a contracture of the thumb.

Since gangrenous tissues separated, August 1, 1923, child has improved rapidly, eats and sleeps well, and is gaining flesh and strength.

August 11, 1923—Examination—Hands and feet are still red, but warm, and seem very sensitive to touch—will not tolerate stockings. There are still a few small pustules on right middle and little fingers.

Duration—Five months. Striking features in this case are the spontaneous amputation of a phalanx, and marked broncho-pneumonia with very little cough.

Case Five:

Female, age 20 months.

First seen, March 6, 1923.

Fifth child, others alive and well. Mother had one miscarriage at three months. Birth, normal. Birth weight, 7 pounds. Breast fed one year, then general table diet.

Contagion—Measles at 1 year, whooping cough at 14 months.

Present Illness—Began in February, 1923, with high fever, cough and head cold, fretfulness and pustular lesions of varying size on face and extremities.

When first seen she presented crusted impetiginous lesions of face and extremities—no suspicious symptoms at that time other than restlessness and insomnia, erroneously attributed by me to the extensive impetigo. She was referred to a skin clinic.

The first week in May, 1923, started with cough, slight fever, pains in head and back, was very restless day and night, and lost appetite. Soon thereafter she became very cross and irritable, kept eyes partially closed and avoided the light, pulled out tufts of hair, slept very little, rubbed and scratched hands and feet, which became red, slightly swollen and cool to the touch. Also picked and rubbed nose, which was discharging purulent material freely. Drank water in large quantities and urinated frequently day and night, no dysuria.

Entered Lucas County Hospital, May 19, 1923.

Examination—Well developed, fairly nourished female child, very sullen and irritable, resenting attempts to amuse her. She sits with head in hands and elbows resting on knees. Profuse purulent nasal discharge which she spreads over face by frequent picking and rubbing of nose. On nose, cheeks upper lip and chin impetiginous patches are seen. She claws at hands and feet. The fingers, hands, toes and feet are bluish-red, peeling around fingers and toes, cold and moist. Eyes half closed and she turns from the light. Pupils react to light and accommodation. There is no nystagmus or strabismus. Hair is dry and missing in large patches. Ears are discharging profusely thick, foul-smelling grayish-white pus. Teeth are fair, no ulceration. Tonsils are enlarged and pus can be expressed from left. Adenoids block naso-pharynx. Heart and lungs normal, reflexes normal. Extremities are hypersensitive, no areas of anesthesia made out. Lymph glands palpable, small and hard. Muscles are flabby. Urine, negative. Blood—Hb. 55 per cent; R. B. C. 5,800,000; W. B. C. 17,560; Poly. 72 per cent; Lymph. 25 per cent; Trans. 2 per cent; Eosin. 1 per cent; blood Wassermann, negative. Culture from ears, Diphtheroids, from mouth, staphylococci.

June 8, 1923.—Tonsils and adenoids were removed —left tonsil pus-laden. Six days later there was marked improvement in general condition, lesions on face clearing up rapidly, nasal discharge almost ceasing. Gradual improvement and left hospital July 15, 1923.

July 25, 1923, returned to Dispensary. Mother reports better for three days after leaving hospital, but past week has slept very little, scratches body surface, hands and feet much of the time, eats little, drinks a quart of water during the night, urinates frequently, sun-light hurts eyes, and sweats considerably. Skin is moist and cool, miliarial-like rash present on trunk, arms and thighs; hands and feet, cool and slightly red with slight peeling of palms and soles. Left patellar reflex active, right absent; pupils normal. Throat, red and contains excess of mucus.

All symptoms were aggravated for some two weeks when improvement began and when last seen August 15, 1923, she was greatly improved—eating and sleeping much better, interested in surroundings, skin nearly normal.

Duration—Up to present, 6 months.

Comment—Improvement, rapid at first, started after tonsils and adenoids were removed.

Case Six:

Male infant, age 10¾ months. Residence on farm.

Second child, other alive and well. Birth normal, birth weight 7 pounds. Breast fed entirely for four months, then, breast plus whole milk with bread and cornstarch pudding, and did well.

Present Illness—Began March 10, 1923, with a cold, cough and high temperature for eight days, when improved, but was cross, cried a great deal and did not want to play. Would sit up with head bent over between feet and sleep for a time, then lie on stomach, whiney, irritable and restless. He pulled at hair and avoided the light.

One month later, April 23, 1923, a measley-like eruption appeared on neck, back, arms, legs, and on the scalp. He would scratch until bled. Shortly afterwards hands were cool, feet colder and blue, profuse sweats occurred, passed little urine (but once a day) and slept very fitfully, whining, crying and scratching a great deal. For past week has sweat less and urine has increased. Appetite has been good, bowels constipated, cut two teeth the middle of June.

Examination — Temperature normal, weight 15 pounds 8 ounces (weighed 18 pounds at 3 months). General skin surface moist and cool. Feet cool, but show no redness, eruption or peeling. Palms of hands and palmer surface of fingers show redness, peeling and remnants of a maculo-papular rash which fades gradually at the wrist. Both genito-crural folds present large markedly thickened intertriginous lesions, similar in appearance to those of erythrasma. Irregular dark red small macular lesions are seen over lower abdomen and lumbar region of back. Mouth—Two teeth, normal; on inner surface of left cheek there is a small oval lesion resembling a mucus patch. Throat is congested, tonsils moderate size and reddened.

Reflexes, normal. Slight general glandular enlargement, posterior cervical moderately enlarged. There is no strabismus or nystagmus—turns from light and keeps eyes half closed.

Treatment and Course:

Breast, plus complete diet. Local soothing applications—Calamin lotion with Menthol and Phenol and a weak crude tar ointment for lesions in the groins. General sedative mixture of chloral and sodium bromide was ordered for sleeplessness, and Cod Liver Oil as a tonic.

Continued to eat well and though skin suffered recurring rashes, improvement was rapid.

On August 8, 1923, when seen again, mother reported that he cries and scratches little, sits and plays and laughs, stands, holding on. Still sweats considerably while asleep, wakens several times during the night, but quickly goes back to sleep, and shuts eyes in sun light.

Weight is 15 pounds 10 ounces. Temperature normal. Hands and feet are a trifle red and cool, no peeling. Small papular lesions over shoulders, on lower back, buttocks and thighs. Indurated mass size of pecan in anterior fold of right axilla and an ulcer at right upper corner of mouth. Lymph glands normal.

Duration—Five months to date.

COMMENT

In the six cases presented, all began with, or followed shortly after, inflammation of the upper respiratory tract, the date of onset being from January to April, ages varying from 10¾ months to two years, one month. There were no two cases from the same family or neighborhood. Two lived on a farm, one in a village and three in the City of Toledo. Duration of illness was from three and one-half to eight months. An unusual feature was the spontaneous of a phalanx.

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DISCUSSION

DR. LARNED, (Grand Rapids): I feel very much indebted to Dr. Giffen for this presentation. I think it is a condition that I know in my own case went for a long time unrecognized. The striking thing about these cases to me, and the history of the cases is that practically without exception in my own experience, they are children that have been for a long time breast-fed; children that have been nursed a year or 14 months, or that give a history of having been nursed for nine or ten months and not having gained for the last two or three months off the breast; haven't had much in the line of additional food, and with it a marked loss of weight all the time before they come to your office.

The question of etiology is a very interesting thing. Whether it is infection or lowered resistance or deficiency disease is not settled. It is certainly a very interesting thing. I had one of these children that, after it started to improve somewhat, developed hemorrhagic purpura and died. I think that is the only case I have had in my experience.

DR. BLISS, (Kalamazoo): We had one of these cases last year. The interesting fact was, it was under the care of the pediatrician, on a perfectly balanced diet, in a very high-class family where all the hygienic dietic conditions were absolutely normal.

The etiology is an important thing, but I don't see how we are going to get at it, because so few children die of acrodynia. I think, until we are able to get some history we will be unable to make a correct diagnosis.

DR. COWIE, (Ann Arbor): We have had a few cases at the University Hospital. I think—well, they follow the description that has been given by Dr. Giffen. We have recorded one or two cases, but so far as the etiology is concerned the whole

thing is up in the air at the present time. Dr. Byfield's work is most interesting. I think he rather leans to the idea of some infection being at the bottom of these cases.

CHAIRMAN COOLEY: It was my good fortune to have seen one of the few fatal cases. By the way, Byfield included this case in his list, after a personal conversation with me, but de did not get in the fact that it was fatal. It was a remarkable case in that the child actually had eaten four of its own fingers. It was not just a case of gangrene and the tissue dropping off, but the child had actually eaten the last two phalanges of four fingers and had clawed a large part of the flesh off both feet. I saw the child only two days before it died, so I didn't have much chance to make a thorough study of the conditions, but it was really a remarkable case, and the only thing that might be considered an etiological factor was an infection which evidently had been an unrecognized diphtheria shortly preceding the onset of the condition.

The others I have seen have been more or less what Dr. Giffen has described, but my impression is that it is not nearly so common in our region as it is in some others. That is why I asked Dr. Cowie about Ann Arbor. My impression is that it is not nearly so common in the region of Detroit as some of the other larger cities and surrounding territories.

DR. COWIE, (Ann Arbor): May I say another word? The cases we have had have been from outside of the state of Michigan. The first case came from Ohio, somewhere near Dayton.

I think we want to be very careful in making diagnoses of acrodynia, in those cases where the fingers drop off or where tissue comes away, and in those cases associated with suppurative process you must remember there is a differentiation between that and Raynaud's disease.

MENSTRUATION AND ITS DISORDERS AT PUBERTY AND EARLY ADOLESCENSE*

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This paper is presented to the Pediatric Section of the Michigan State Medical Society for the purpose of stimulating thought on prevention of the exceedingly common disorders of menstruation. The subject is a broad one and it takes years of time to prove whether or not we can prevent any of the suffering and loss of time that is apparently now necessary. But can we not in our practice of hygiene of childhood keep the maternal future of the girl in mind and perhaps by closer attention to the care of the feet, bodily mechanics, clothing, exercise, etc., assure the young woman the same comfortable existence she had in the years before puberty?

From the very earliest times the phenomenon of menstruation has been the subject of much speculation and study. The older ideas as to the nature of the menstrual process represent a curious blending of speculation and superstition, with very little foundation in real fact. The element of mystery in the phenomenon inhibited intelligent efforts to study it. Even before the time of Hippocrates menstruation seems to have been looked upon as a cleansing process—a periodic purging of the blood from filth and impurity. Pliny spoke of menstrual blood as being a fatal poison, corrupting and decomposing urine, depriving seeds of their fecundity, destroying insects, blasting garden flowers and grasses and causing fruits to fall from their branches and dulling razors, etc., and there were beliefs even more ridiculous, with many of which you are familiar.

The really scientific study of menstruation dates from the work of Negrier, in 1832, although the twentieth century, young as it is, has yielded perhaps the most valuable information. Modern methods of scientific investigation are gradually sweeping away the mystery and superstition which has accumulated about the subject, in its passage down the folk paths of the centuries.

Where does the menstrual blood come from? The immediate source is from the mucous membrane of the uterus above the internal os. The mucosa of the cervix plays no active part in normal menstruation. The cervical canal probably dilates slightly during the period. Herman states that it has its maximum diameter on the third and fourth days. This perhaps explains why certain cases of dysmenorrhea are apt to be relieved after the first day or two of the flow. At the present time we have not sufficient evidence to state whether the Fallopian tubes participate in the process of menstruation. They may or may not.

PHYSIOLOGY

The older theories of the cause and mechanism of menstruation are about as bizarre as their beliefs of the process itself. Not until our recent knowledge of the internal secretions was our present idea possible. We now believe that the ovary gives forth an internal secretion which is responsible for the phenomenon. There are some who take exception to this theory, but the evidence in its favor seems quite overwhelming. The cessation of menstruation after castration, the reappearance of menstruation after successful transplantation of the ovaries, and the occasional appearance of menstruation after administration of ovarian extracts, all speak for the essential importance of the ovary in its production. There is some doubt as to which part of the ovary is responsible, but the corpus luteum seems to have the majority of the evidence in its favor. Its developmental cycle parallels the characteristic premenstrual swelling of the endometrium. The menstrual hemorrhage, however, does not occur until the in-

*Read before Pediatric Section, M. S. M. S., Grand Rapids, September, 1923.

hibitory influence of the corpus luteum is removed by atrophy of the structure.

Although menstruation is in itself a purely physiological phenomenon, it often gives rise to much discomfort, sometimes amounting to actual disability. It is difficult to draw any sharp line between the mild subjective symptoms experienced by many women at this time and the more severe discomfort which is entitled to the designation of dysmenorrhea. In any consideration of the symptom of pain, the personal factor plays an all important part. The subject is further complicated by the well known fact that normal menstruation may occur even in the presence of the most extensive pathological conditions in the pelvis. In general it may be said that normal menstruation is not accompanied by actual pain although there is often a sense of heaviness and discomfort in the pelvis. About 68 per cent of healthy girls suffer no pain at all. The others vary from "occasional slight pain" to "occasional severe pains." About 5 per cent require rest in bed for one or more days each month. Two-thirds of the cases have the pain in the abdomen, 6 per cent in the back alone, 6 per cent in both back and front, 5½ per cent have pain in legs, 2.8 per cent have headache or general physical disturbance.

The remarkable regularity with which menstruation recurs throughout the sexual life of the woman is perhaps the most difficult of explanation of all the characteristics of the process. As is well known, there is in many girls a marked tendency towards irregularity for some time after the inauguration of the function. The statistics of Emmett, based upon 2447 cases, showed that in 72.3 per cent menstruation was regular from the beginning. In 18.9 per cent it became regular after a certain time, and in 8.7 per cent it was never regular. The average time required for the function to become regular when it commenced irregularly was 18 monthes after the first appearance.

The duration of the entire menstrual cycle in by far the largest number of women, is 28 days. A considerable number, however, menstruate regularly at intervals of 21 days, and a few every 14 days.

Much variation is seen in the duration of the flow in different women. The important fact from a practical viewpoint, is that within certain rather narrow limits every woman has her own standard by which she may judge the advent of abnormality. The average duration given by Emmett was 4.8 days, but individuals vary from one to eight days. Kelly emphasizes the fact that in those cases in which the duration was over six days the amount was described as excessive. He concludes that "a duration of more than six days is so frequently pathologic that it should never be regarded as normal, unless the patient's health is fully up to par."

The amount of menstrual discharge is difficult to measure, hence there is a great divergence in the estimates of various authors. It is probably not far from correct to say that the average blood lost at the menstrual periods is from two to six or eight ounces, although the individual differences are great. The greater portion of blood is lost during the first half of the period.

The beginning of menstruation is usually preceded by a discharge of mucous, which may continue for several days. On the appearance of the blood, in what might be called the secondary stage, the preliminary discharge becomes gradually mixed with blood until it appears to be blood alone. In the third stage the flow disappears in a manner the reverse of its gradual appearance. In addition to blood menstrual discharge contains a greater or less amount of mucin, disquamated epithelial cells, bacteria and debris. The characteristic disagreeable odor is partly due to the decomposition of blood elements and partly to the activity of the sebacious glands of the vulva.

Menstrual blood acording to Krieger, differs from venous blood in its high water content. The serum in the former contains 93.5 per cent water while venous blood contains 90.6 per cent water. By far the most interesting characteristic of menstrual blood is its non-coagulability. The well known experiment of puncturing the tissues of the cervix during menstruation brings out sharply the difference in this respect, between the menstrual blood and that of the body generally. The blood which oozes from the pucture clots readily, while that which comes from the cervical canal remains fluid.

PUBERTY

Puberty is one of the critical periods in the life of a woman. It marks the transition from girlhood to womanhood, and is characterized by certain anatomical and physiological changes which indicate the awakening of the sexual apparatus to activity. It would seem that in both sexes the reproductive organs, not being essential to life are the last to take up their characteristic functions. Before puberty all the organs of the body show a gradual development—except the generative organs. Their awakening marks the beginning of what is virtually a new existence for the girl. The growth of the organism up to this time seems to be the result of the potential energy derived from the blending of the ovum and the spermatazoon. With the awakening of the sex organs, however, it seems that the

burden of further growth and development is taken up by them. Not only are they reponsible for the appearance of the so-called secondary sexual characteristics, but they also exert a profound influence on the physical and mental growth of the individuals.

At the age of puberty, there occurs a rather sudden and usually striking acceleration in the development of the girl. Her figure begins to take on the outline of a woman—the hips become more rounded, the breasts fuller and more prominent, and the nipples become larger. In some cases the hypertrophy of the breasts may become pathologically excessive, constituting the so-called "diffuse virginal hypertrophy." As a result of a general deposit of fat, the lines of the entire figure become softer and more rounded. A growth of hair appears on the vulva, mons veneris, and in the axillary spaces.

In addition, there occur certain well defined anatomic changes in the reproductive organs. The uterus becomes larger, the fundus more convex and proportionately longer than the cervix. The tubes and ovaries which in the young child are undeveloped, also increase in size at this time. The mons veneris becomes much more prominent, owing to a deposit of adipose tissue, and its skin becomes covered with hair. The labia majora, which are very rudimentary in the young child, become much more prominent. As a result the labia minora becomes more or less concealed.

A radical transformation takes place in the psyche of the girl at this period, for now she becomes conscious, for the first time, of the distinction between the sexes. The exact effect of the new impulse in the girl's life varies according to the temperament of the girl, her environment and associates, and other such factors. A certain element of shyness in the presence of the other sex, a tendency to day dreaming, and a strain of romanticism are often observed. The most important event, however, is the appearance of menstruation. It is sometimes said that onset of menstruation marks the beginning of puberty; strictly speaking, however, this is not correct, for menstruation is only one of the phenomena which make up this period of transition.

The average age of onset of menstruation in the United States is 13.9 years, while in the corresponding temporate zone in Europe, it is 15.5 years. Contrary to the general impression, climate does not exert a powerful influence on the age of onset. It has usually been believed that menstruation appears at a much earlier age in warm countries than in cold, but this is not an invariable rule. The influence of race also seems to be less important than generally believed, and the same thing applies to manner of life. Individual factors are probably much more important in influencing the age of onset. The mentality of the girl, her surroundings, her education, her temperament, etc., all stand out prominently as factors, which determine precocity in the appearance of the menses. In addition, over-nutrition, excessive meat diet, and intense mental activity are among factors which tend to accelerate the mentrual onset. On the other hand, simple, regular and moderate diet, and avoidance of excessive nerve strain or mental work are retarding factors.

Puberty occurs primarily because of the development and functioning of the ovary. But there is a most intimate correlation of function between the ovary and certain other ductless glands, the most important of which are the thyroid, the thymus, the suprarenal, the pituitary and pineal body. All of these structures have a possible auxilliary influence in the production of the secondary sexual characteristics. It is probably correct to say that when the correlation of function of these various organs with internal secretions is a harmonious one, the anatomic and physiologic changes so characteristic of puberty appear in a normal manner. When, on the other hand, there is a break somewhere in the functional chain representing these organs there is apt to be some sort of abnormality of puberty, either in its character or in the time of its onset.

The hygiene of puberty should not be neglected. A mother can do a most valuable service at this time by preparing her daughter for the advent of the menstrual process, which might otherwise frighten her. Proper instruction in sex-hygiene should be given and her clothing, bathing, diet, recreation and rest should be supervised in a safe and sane manner. It is a dangerous thing for the public schools to crowd too much into the curriculum of the child of this age. Many an invalid woman is the end product of the delicate overworked school girl.

Although the average age at which menstruation begins in this country is about 13.9 years there are many cases in which the onset is considerably lower than this. Speaking generally, it may be said that if menstruation begins and recurs regularly in a girl of less than nine years of age, it must be looked upon as precocious. The history of cases of precocious menstruation show that some evidence of precocious maturity is often observed at the birth of the child. In some, it is the unusually large size of the child, in others the prominence of the breasts or the presence of hair on the vulva.

PRECOCIOUS MENSTRUATION

According to Lenz, there are three types of precocious menstruation. In one group the premature onset is accompanied by maturation of the sexual organs, and is associated with evidences of general bodily development which ordinarily characterize puberty. This group embraces the majority of cases of precocious menstruation. In the second variety the development of the reproductive organs are again observed, but in connection with tumors involving the ductless glands. In the third group, seen only in a small minority of cases, the precocious menstruation occurs in the entire absence of any other manifestation of premature activity, on the part of the generative organs. Not all cases of precocity continue menstruating up to the time of the menopause. Such a course seems to be the exception, rather than the rule. In some cases menstruation is irregular throughout. In others it is regular for a time and then ceases altogether. In Klein's case the periods occurred regularly for four months, were followed by a period of amenorrhea, and ceased altogether following an attack of measles. On the other hand, in some cases, menstruation has commenced at a very early period and has continued without interruption, except when due to pregnancy or lactation—for many years. One noted case of this was reported by Von Haller in 1751. His patient menstruated regularly from the age of two. At nine she became pregnant and gave birth to a child. Menstruation continuing regularly up to the age of 52, the woman reaching the age of 75.

In spite of the physical precocity in these cases, psychical development is as a rule very poor. In the case of Lenz the child still played with dolls and small children at the age of ten.

Quite a number of cases of pregnancy have been recorded in girls who exhibited precocious menstruation. Perhaps the most remarkable of these is the case reported by Mandeslo, of a child who commenced to menstruate at the age of three and who gave birth to a son at the age of six. In addition to this Lenz has collected 10 other instances of childbirth at ages from eight to 12 years.

The cause of precocious menstruation or of precocity in the other manifestations of puberty in the majority of cases cannot be explained. In view of our ignorance concerning the exact cause of normal puberty, we can only say that premature puberty, like the normal process is probably due to a stimulus arising in some way from the ductless gland chain, and especially, of course, from the generative glands. Much weight is given to this theory by the autopsy findings in a number of cases of precocious puberty, where tumors of the generative glands were found. Even more conclusive are several cases in which such tumors have been removed at operation, with the disappearance of the signs of early puberty. Numerous cases have also been reported in which tumors of other ductless glands, notably the suprarenal, pituitary, pineal and thyroid, have been associated with symptoms of sexual precocity.

Medical treatment is never required in precocious menstruation. The time will probably come when organotherapy will be of prime value in the treatment of this as well other menstrual disturbances. At present, however, our knowledge of this subject is so imperfect that no intelligent plan along these lines can be suggested. As Morse emphasizes, the psychological treatment of these cases of premature development is of much more importance. The early development of sexual desire, long before the development of the will power, exposes these children to the danger of violation, as shown by the many cases of early pregnancy which are recorded.

It is probable that many of the cases reported in the earlier literature as cases of precocious menstruation were in reality instances of hemorrhage of non-menstrual character. About one in every 285 new born female infants have a few drops of blood appear from the genitals within a few days of their birth. But this is small in amount and rarely recurs as in menstruation, and these cases never show any of the secondary sexual manifestations.

During the first year or two of menstrual life, periods of amenorrhea are commonly observed, lasting from two to several months. This may occur even in girls who are entirely healthy in every respect, i. e., who are not suffering from such conditions as anemia, tuberculosis, etc. This physiological amenorrhea requires no treatment except perhaps reassurance of the patient. If, on the other hand, menstruation does not appear at the normal age, and if such a primary amenorrhea is associated with other evidences of lack of development, it is reasonably certain that there is some disturbance of endocrine function. Unfortunately it is not always possible, in the present state of our knowledge, to determine just what the endocrine defect is. In the majority of cases, it is probable that the fault lies with the ovaries or the pituitary, and hence administration of extracts from these glands is indicated.

Patients who fail to have the menstrual flow at the usual time of puberty should be examined for the possibility of gynatresia, which is a closure of some portion of the genital tract. In by far the largest number of cases the atresia is noted in the lower portion of the vaginal canal. No symptoms may be noted

before puberty, but after, it causes a retention of the menstrual flow. Menstruation really goes on approximately as in the normal woman with the exception that the menstrual discharge is prevented by the obstruction from reaching the exterior. Congenital gynatresia is manifested as an imperforate hymen or some developmental error in the generative organs. Practically all the well known forms of malformed uterus may be associated with gynatresia, such as uterus didelphys, uterus bicornis or unicornis, uterus bisepticus, etc. The vagina may be single, double or absent. Secondary gynatresia is due to an inflammatory or ulcerative process, which results in adhesions between the vaginal walls. The retention of the menstrual flow, sooner or later causes pain at time of periods, bulging of the hymen or as the condition advances to the development of hematocolpos, hematometra, and perhaps hematosalpinx, a tumor is observed in the lower abdomen. The only treatment is surgical.

DYSMENORRHEA

Dysmenorrhea may be primary—or that type of painful mentruation which is not associated with gross pathological lesions in the pelvis, or it may be secondary to definite pelvic disease. Primary dysemenorrhea may be due to mechanical obstruction in the uterine canal; hypoplasia of the generative organs; neuroses of one form or another; or constitutional diseases. A few are relieved after mechanical dilation of the uterine canal—but there is no definite proof that antiflexion has any bearing on the production of the pain. The infantile type of uterus is nearly always accompanied with pain at the time of menstruation and it is usually found after marriage, the woman with an undeveloped uterus is sterile. The amount of menstrual discharge from this type of uterus is small but the amount of congestion in the uterine blood vessels is just as great as in the normal uterus. This fact may explain why the pain occurs in this type of case. Frequently it is the pelvic organs that bear the brunt in cases of neurosthenia. These patients, however, usually have pain in the intermenstrual period as well as during menstruation. When their general condition is improved the dysmenorrhea is also generally relieved. When painful menstruation is asociated with anemia, tuberculosis or other constitutional disorders one should look first to relieving the general condition. The treatment for primary dysmenorrhea is usually directed towards the relief of pain. Combinations of acetphenetedin and caffein are usually administered. For the spasmodic type, however, atropin given to a point of tolerance for two days before the period very often prevents the pain. The only radical cure for these cases is pregnancy.

Occasional cases of menorrhagia are seen at puberty. These respond very well to half-drahm doses of the fluid extract of ergot. Metrorrhagia rarely gives trouble at this time.

The only remaining topic concerning menstruation which is of interest to us is the relation of the internal glandular system and its disorders. Cases of this type are usually easy to recognize from their general appearance and their treatment depends upon what we are able to do for the underlying cause.

The question now is, what can we do to prevent these various difficulties? Will wearing properly fitting shoes throughout childhood have any effect? Will correct posture in standing and walking have any prophylactic value? Also, what about overwork? We have every reason to believe that these factors might be extremely influential, but no one has published any conclusive evidence by which these questions may be definitely answered.

*The material for this paper taken from Monograph by Emil Novak; Menstruation and Its Disorders, 1922.

DISCUSSION

DR. COWIE, (Ann Arbor): I encouraged Dr. Brown to go on with his study of menstruation, and I think it is a very important branch for the pediatrist to interest himself in. The great handicap to women, particularly in the various occupations in which they engage, nursing, for example, because of menstruation, is apparent to all of us. It has occurred to me that if the pediatrist would interest himself in its study that he might be able, or that we might be able to find some cause in the development of the child in childhood and possibly we might be able to suggest measures to overcome this serious difficulty—more or less serious difficulty.

In other words, I believe that really it is a child welfare problem and ought to be considered by us, and I think it never has been considered by the pediatrist. It has been considered by the gynecologist, but it has not been considered by them until after the child is a woman and that is probably too late to do any especial good.

DR. BURLEY, (Port Huron): I don't belong to the section, but I came up here expecting to hear this paper because, as Dr. Cowie has just said, I believe that the province of prevention and helping in the welfare of our young girls belongs to this section. When we stop to think of the number of days that single girls, that is, nurses and girls in business, lose on account of painful menstruation, it amounts to a great deal of value in dollars and cents. I was hoping that Dr. Brown had arrived at some definite process whereby he was able to prevent this; the doctor seems to have given a great deal of time to his paper which has been a source of great help to me. He is to be congratulated on the work he has put on it.

But I would like to ask if he has any method by which he teaches young girls or their mothers anything in regard to the welfare of the girls in this regard? Does he follow these cases up from childhood and instruct the mothers along the lines of preventing these things, or is he just doing it as he said, to see what the future will do?

MISS BERRY, (Kalamazoo): I have enjoyed the paper of Dr. Brown very much. I don't want to answer the question that has just been asked, but I would like very much to help with some experi-

ence that we have had over a number of years in the gym. We watch these girls with painful menstruation, and we use a rest period during gymnastic exercises to stress deep abdominal respiration. We feel that physiologically there are reasons for these pains, and deep abdominal respiration helps to relieve them.

DR. ROSENTHAL: Personally I haven't had very much experience, but I have always felt in general practice covering several years that much of this could be controlled if the school board would forget that the brain is the only thing to educate. I think that our children, especially the girls, as well as boys, should be taught to play more, to romp more, to get more actual physical exercise to build their bodies, at the same time as their brains are building. If that were done I think a great deal of our menstrual troubles would disappear as the girls grow older. I have a child myself, now only nine years old, going to school. She is only in the fourth grade, and I am just beginning to realize how the school boards in the city push them along. Now my wife wants her to take up music and pretty soon I will want her to take dancing. Her time will be so occupied that her body won't be developed as it should be. I am finding it out at every turn.

I think a child should have three or four hours of good, hard physical play to build the body. The gymnastic work which children take at school is good. When a parent comes to me for a certificate so that her girl will not have to take gymnastic work, I refuse to give it unless there is a very good reason. Lots of girls are lazy. Don't want to work; they don't realize what it means to them in their future life.

The subject of shoes, too, is a very important one. Decidedly so. Young girls of today are very much enthusiastic over style. They don't seem to realize that the position in which they walk with high heels will do them actual physical damage and I do really believe that a pediatrist should undertake this work; it is his vocation; and, as Dr. Cowie says, it is a matter of a welfare department with the pediatrist, and it is purely an educational matter. There is room for much more work of an educational nature in this field.

DR. BROWN (Closing): In answer to Dr. Burley's question, this paper is simply a preliminary report on the subject with the object of stimulating thought in our group of practitioners. I haven't the real data to offer to answer his question. I think, possibly in 15 years, maybe, we can answer it. At least, we can try, and that is more than we have done in the past.

Since the reading of this paper I have been able to prevent the pains accompanying menstruation in one case by the use of diathermy.

ACUTE TRAUMATIC INJURIES OF BRAIN*

H. E. RANDALL, M. D., F. A. C. S.
FLINT, MICH.

That there are definite indications for operative procedure after head injuries and that there are also on the other hand contra-indications when not to operate seems to be unknown to the laity and not a few physicians if I may judge from my own experience. Brain injuries seem to me to be in the same stage that the "Acute Abdomen" was 25 years ago.

There seems also to be quite a very common idea that all head injuries require operative measure for their relief regardless of the pathology. On the other hand some cases die that could possibly be saved if the clearly defined danger signal were recognized.

In these days of rapid transit and high powered machinery it is necessary that every physician know when to advise operation and when to leave his patient alone.

It is an old saying that a man may receive a slight injury to his head and die, while another may receive a severe injury and recover. Jusy why, the older Doctor did not know. We today are able to differentiate these cases.

MORTALITY

In looking over the records of various hospitals there is a startling mortality. In Cook County Hospital, Chicago in 1,000 cases having any type of fracture of the skull there was a mortality of 53 per cent. In St. Louis, J. W. Stewart (A. M. A. J.) analyzed 6,135 head injuries of which 617 showed skull fractures and found the mortality was over 50 per cent and that of those 300 who recovered, 164 had headaches and various other symptoms which may follow brain injuries.

For over 20 years I have been attending surgeon to the Michigan Home for Epilepsy and Feeble Minded and the staff are of the opinion that traumatism plays a very small part in the causation of these mental conditions.

In the adult however, Stewart quotes English that a man is never the same after a head injury. This, of course, depends upon the type and severity of the brain injury. It agrees however, with the wozzy head of the ex-pugilist.

I am convinced from looking over hospital records that many head injuries are operated on while in shock. To operate in shock unless due to hemorrhage is like throwing a stone to a drowning man and expect him to swim ashore.

While we do not know exactly what shock is, it is usually manifested by a low blood pressure and a rapid pulse. There is a paleness and clamminess of the skin which cannot be forgotten. I have seen patients in shock with a normal beating pulse but this is extremely rare. We have then in shock a fast pulse and a low blood pressure.

CLINICAL PICTURE

In a typical brain injury the clinical picture is diametrically opposite. Here we have a slow pulse and a high blood pressure and the latter creeps higher and higher and the brain pressure increases until the stage of medullary

*Read before Section on Surgery, M. S. M. S., Grand Rapids, September. 1923.

compression, when the pulse commences to climb up.

Now this is the important point in all brain injuries. Do not operate in shock. Death will occur in all cases in which the pulse rate reaches or exceeds the systolic blood pressure measured in millimeters of mercury.

We have, I believe, definite indications clinically when and when not to operate in the typical brain injury.

There are other methods of examination which are sometimes of great aid but should not be relied upon implicitly.

The X-ray has been commonly relied upon for a diagnosis of brain injury. It of course, will reveal fractures of vault whether linear or depressed and basal fracture but it cannot possibly show the amount of brain injury which can only be ascertained by other means.

Another valuable aid in diagnosis is the eye ground examination by a competent ophthalmologist. Here again one must not rely too much upon this report. There may be plus I diopter in a case unconscious for weeks without operative indications. The examination of eye however should routinely be done to check up general symptoms.

The general neurological value examination has not been in my experience of any great value except in a very small proportion of cases.

I do not believe however that the taking of spinal fluid pressure is of extreme value. In a case showing a pressure above 12 mm. with the Fischer spinal manometer immediate decompression operation is indicated if your patient is to be saved from medullary compression and edema which means approaching death. Remembering always that a slow pulse with high blood pressure means a severe brain injury and that operation must be done before the pulse rate exceeds the systolic pressure. Remember also we speak of taking the spinal pressure and not drainage. There has been several deaths following spinal drainage because the medulla oblongata has been forced into the foramen magnum with instant death. I am not in favor of spinal drainage but believe the reading of the spinal pressure is of immense value.

An injury with hemorrhage from the middle meningeal artery gives usually a very clear clinical picture. There is a period of unconsciousness followed by consciousness to be followed by another period of unconsciousness. These typical cases should be operated. Why some writers do not agree with this teaching is beyond my understanding. No one, it seems to me, would care to leave a clot of blood on a delicate structure such as the brain. I have seen five cases, all have recovered after what I consider proper treatment, viz.: ligation of the artery.

With traumatic head injury in childbirth I have had no experience but in 116 G. S. W. of brain which I saw in service I firmly believe the best treatment is to leave them alone.

I can sum up my experience in head injuries with the following comments.

COMMENTS

1. All depressed fracture of the vault should, I believe, be operated after shock has passed.
2. Severe brain injuries give a slow pulse and later a high and rising blood pressure.
3. Shock gives a rapid pulse and low blood pressure. No operation.
4. Middle meningeal artery hemorrhage gives a definite clinical picture of loss-regain and loss of consciousness, practically the only brain hemorrhage the surgeon can control.
5. Pupil dilatation and light re-actions are neither of diagnostic or prognostic value.
6. Loss of consciousness is not of itself an unfavorable prognostic sign.
7. Medullary compression and edema following brain injury show an increasing pulse rate with a rising temperature and respiration to the moment of death. A typical chart.
8. Brain contusion and laceration with symptoms of shock have a rapidly rising temperature, respiration and pulse and nothing in a surgical way can be accomplished.
9. In doing a decompression operation be sure to find out if the patient be right or left handed.
10. Conservative treatment is best for most cases of head injuries. Probably less than 10 to 20 per cent of all cases require operation.
11. Charles H. Frazier in an editorial in Surgery, Gynecology and Obstetrics, summed up that temporal decompression will not always tide the patient over the crisis. As a matter of fact, temporal decompression in which there is no free fluid and the brain herniated through the dura you must give a guarded prognosis. With an excess of cerebus spinal fluid in the arachnoid and sub-dural spaces the case is more favorable.
12. We should discard such terms as concussion.

DISCUSSION

DR. F. C. WARNSHUIS, (Grand Rapids, Mich.): The present amount of traffic upon our highways and the congestion upon our streets have brought to our hospital doors and to the offices of our doctors an increasing number of intracranial injuries which demand a definite treatment if we are to maintain a mortality that is consistent with the skill we are presumed to possess. This is particularly true when we consider that in 38 articles on the subject, 32 different methods of treatment were recorded. It is time for us to have a definite plan

of treatment. The outline Dr. Randall has given us this afternoon is one that well serves as a guide by which we can obtain a more desirable mortality rate and better end results following these injuries. If one has to contend with a patient who has developed paralysis, has a slow respiration of the Cheyne-Stokes type, with a slow pulse or one that is moving from 70 or 80 to 100 or 120, with other signs of intracranial pressure, then I agree with those who say that we had better leave these patients alone if we are content with a mortality rate of 53 per cent. On the other hand, records of hospitals where a large number of these cases come, like in the Metropolitan Hospital of New York, quoted by Dr. Randall, show that the mortality can be reduced to 30 or 37 per cent. Then it is our duty to introduce treatment of such nature as will maintain this 20 per cent reduction in mortality. That will be accomplished by first studying every case that comes to us in a careful manner and watching, by our examinations, the progress that is occurring following the injury that has been sustained. Thirty-one per cent of the cases may only show signs of intracranial pressure. It is this 31 per cent of the cases that we are called upon to deal with in a definite manner and Dr. Randall has given very well the signs and indications which tell us when we should become more aggressive in our treatment. For the first six hours the patient will remain in a more or less unconscious condition. Unless there is compounding of the injury with active hemorrhage, then we may well defer all operative interference until the patient has recovered from the shock. If the patient, six or twelve hours after the injury, commences to show signs of inceasing intacranial pressure, congestion, anemia, collateral edema and finally compression, if we let the patient go on to that stage where the respirations are slow and the pulse runs 50 to 60, we should then do a decompression and in doing a decompression we should do a subtemporal one bilaterally and be sure at that time that we also make an incision of the dura; if we do this, we are giving that patient a fair show for recovery. That is the only indication for operative interference on these fractured skulls with the subsequent brain symptoms that occur except in those that show symptoms of intracranial pressure. This statement is based on personal experience, for it was just the last month in which we had 11 fractures of the skull with one death. That death occurred in a child of 6 years, who had a depressed fracture, compounded, with active hemorrhage. In the endeavor to stop the hemorrhage the fracture was raised and as it was raised it was found the bone fragment had punctured the lateral sinus and a fatal hemorrhage occurred. The others all recovered.

I want to repeat that I think Dr. Randall has given us a line of treatment which, if followed, will reduce our mortality from 50 per cent to in the neighborhood of 30 per cent.

DR. DONALD R. BRASIE, (Flint, Mich.): The records of a Receiving Hospital in Detroit show that the mortality from skull factures is much better without operation. I have a compilation of 95 consecutive cases of skull fracture from the records of Receiving Hospital. Out of the 95 cases there were 36 deaths, a mortality of 38 per cent. Of these 36, 6 were typical alcoholics and 6 had injuries of other parts which of themselves were sufficient to cause death. One was a compound fracture of the left femur in an old man. Subtracting these 6 cases from the 36 leaves only 30, or a mortality of 31.6 per cent due to skull fracture, which, as indicated, is a low mortality rate for this type of injury.

Of the 95 total fractures, 54 were of the vault, and of these there were 9 deaths, or a mortality of 16.6 per cent. Of the fractures of the base there were a total of 41, with a mortality of 27, or 65.8 per cent.

Deaths from skull fractures show somewhat different according to the age group. In the 1-20 age group there were 7 deaths, or 21.9 per cent. In the 21-40 group there were 12 deaths, or 37.2 per cent. In the group from 41 on there was a mortality of 43.6 per cent, showing the mortality rises according to age. Of the total deaths, 17 died within 6 hours; 18 lived from 6 to 24 hours; 8 lived more than 24 hours. Of the total group there was only one case operated following a rapid rise in pulse and respiration. This case was operated on four hours after injury and while still in shock. The patient died three hours later.

The routine treatment that is recommended and followed out in the Receiving Hospital of Detroit:

1. Elevate the head of the bed.

2. Immediate S. S. enema or some drastic enema.

3. Icebag to the head and a sedative, rarely morphin, but usually hyoscin. Dr. Sharpe of New York recommends one-twelfth of a grain dose.

4. Blood pressure should be taken every 15 minutes for the first hour and after that one to two hours.

DR. ANGUS McLEAN, (Detroit, Mich.): I think the paper of Dr. Randall is very interesting, particularly so regarding fractures of the base, of which there are a large percentage of cases. I want to emphasize first that we should wait until all symptoms of shock have passed. But you see cases that have symptoms of pressure that later develop extradural hemorrhage; those cases ought to be trephined and ought to be elevated. There are others where you have a subdural hemorrhage and which later on require trephining and drainage. I think these cases referred to are the ones treated in the first 24 hours. The whole of brain surgery as well as that of injuries to the skull is becoming more conservative. This is just one broad step in a conservative direction.

DR. MAX BALLIN, (Detroit Mich.: This paper and the discussions that followed give us many interesting points in the treatment of head injuries. About 10 years ago there was hardly a skull fracture that came into the hospital that was not operated on. Now we handle them in a more conservative manner and we operate only on cases with symptoms of pressure. As a consequence our results are much better.

DR. H. E. RANDALL, Flint Mich., (Closing): I have tried to make it as plain as I could that we must distinguish between the typical head injuries and the shocked cases. That was my primary object in presenting the paper. The typical brain injury with increasing pressure gives a very definite clinical picture. I have a number of charts which I will not show today which illustrate this very accurately. If I could just get this to the medical profession that the shock cases show rapid pulse, low blood pressure, whereas the typical head injury shows increased blood pressure and slow pulse, we would recognize those cases early enough to operate on them to give them relief. Not all cases should be operated on. There are so many phases of acute traumatic injuries of the head that we have not time to take up. I have seen men with depressed factures where many were raving maniacs and as soon as this pressure was relieved they became normal again.

A CASE OF DIABETES MELLITUS IN A CHILD TREATED WITH INSULIN

J. C. MONTGOMERY, M. D.
DETROIT, MICH.

Prior to the epoch-making work of Banting and Best, the pediatrician approached the treatment of severe juvenile diabetes with a feeling bordering on total helplessness. This was particularly true if the diabetes were accompanied by acidosis or coma. The chief causes for this feeling of helplessness in pre-insulin days were:

1. Difficulty in arresting the rapid progress of the disease because of the extremely low carbohydrate tolerance usually encountered in children.
2. The impossibility of even approximating a normal state of nutrition.
3. The difficulty of satisfying the child's craving for food, particularly carbohydrate food, this leading in turn to the stealing of food and the consequent disruption of the entire dietary regimen.

The present case is presented as an illustration of what may be expected from the employment of insulin in the treatment of juvenile diabetes.

The patient, a girl of 6 years, was brought to us on August seventeenth with a complaint of rapid loss of weight. This had apparently begun about three weeks previously and during this interval the patient had lost about 10 pounds. During this same period there had developed marked polyuria and polydypsia and the mother had observed that her usually excellent appetite was somewhat increased. No pruritis had been observed, nor had any ulcers or other skin manifestations developed. For about 24 hours prior to coming under observation an unusual and progressive tendency to drowsiness had been observed and this was the immediate cause for the mother seeking medical advice. There was no knowledge of glycosuria having existed previously.

The family history was important in that a maternal aunt had died of diabetes.

The past history was entirely unimportant.

Physical examination showed a markedly undernourished child. She was distinctly drowsy, but could be easily aroused and answered questions intelligently. There was a strong odor of acetone on the breath. The respirations were slow and deep and entirely costal in character. The skin was dry and extremely loose. Otherwise the physical examination was entirely negative.

An immediate qualitative examination of the urine showed large amounts of sugar, acetone and diacetic acid.

The patient was immediately taken to the hospital, where she was given 10 units of insulin subcutaneously and 10 grams of glucose with orange juice by mouth. In about 12 hours the drowsiness had entirely disappeared and the hyperpnea practically so. There was still a strong acetone odor to the breath and the urine contained large quantities of acetone and diacetic acid. The carbondioxide combining power of the blood was 29.7 vol. per cent. During this period no effort was made to reduce the glycosuria or hyperglycaemia, the latter being looked upon as an important aid in combatting the acidosis. In fact, to insure a hyperglycaemia a gram of glucose was given by mouth with each unit of insulin administered.

On the second day only a trace of acetone and diacetic acid remained in the urine and on the following day the additional glucose given with the insulin was omitted. From this point our efforts were directed toward reducing the hyperglycaemia and glycosuria and producing a gain in weight.

During the third and fourth days of hospitalization the patient received a diet containing 20 g. of carbohydrate, 30 g. of protein and 60 g. of fat and 15 units of insulin, given as 5 units three times a day, one-half hour before meals. On this regimen her blood sugar fell from around 0.3 per cent to 0.2 per cent. She continued to excrete about 26 g. of glucose, however, and her weight remained stationary. It was decided, in order to economize on time to increase both the diet and the insulin simultaneously. She was therefore given a diet containing 25 g. of carbohydrate, 30 g. of protein and 75 g. of fat. Theoretically 1 unit of insulin will account for from 1.0 to 1.5 g. of glucose directly, and allowing for the amount of glucose still being excreted, it was felt that the patient would probably require from 20 to 30 additional units of insulin. These theoretical requirements, however, are only approximate, and consequently only half of this amount was added, making a total insulin dosage of 30 units per diem, or 3 doses of 10 units each. This produced such an immediate drop in blood sugar to 0.133 per cent, that it was felt safer to fall back to a daily dosage of 20 units. On this amount and with her diet unchanged, the urine became sugar free, the blood sugar approximated a normal level and a most satisfactory gain in weight was begun. After a few days of uneventful progress, the insulin was given twice daily in doses of 10 units, one-half hour preceding breakfast and supper. No untoward results were noted from this change and the diet was then stepped up to 35 g. of carbohydrate, 40 g. of protein and 75 g. of fat for a total of 975 calories. On this diet the patient was discharged, the mother having learned the technic of insulin administration and become sufficiently skilled in the preparation of her diet.

As regards the type of diet employed—that on which the patient was discharged from the hospital, while probably sufficient for basal requirements and growth and a certain amount of activity, is still not adequate. It is still lacking both in total calories and in protein. Holt's observations would indicate that a child of this age should receive 3.0 g. or more of protein per kilo and total calories of 75-80 per kilo. This could be supplied by a diet containing 40 g. of carbohydrate, 60 g. of protein and 95 g. of fat, or a total caloric intake of 1,250 calories. As the patient's strength returns and her activity increases, this diet will be approximated and the necessary increase in insulin dosage made. All of these diets give K/AK of 1.3/1 to 1.5/1. We have not felt that the diets giving the higher K/AK ratios which are so advantageous without insulin are desirable with it, although they can of course be safely employed. The reason for this is that an extremely high fat diet which will supply the protein requirements for a child must of necessity contain such a low carbohydrate content as to be relatively unpalatable. The opportunity which insulin affords to give a diabetic child a palatable, satisfying diet, is one of its many advantages.

One of the most striking indices of improvement in the present case is the increase in utilized carbohydrate. This rose from 13.4 g. on August 19 to 65.7 g. at the time of discharge.

An effort is being made to keep the patient's urine

sugar free at all times, as it would seem that only in this way can we hope for the greatest increase in natural tolerance for glucose. There is not, however, a unanimity of opinion as regards the advisability of this. Geyelin and Harrop feel that it is better to allow a constant minimum amount of glucosuria. There is no gainsaying the fact that this provides the greatest safeguard against hypoglycaemia and is probably the preferable method if the physician does not feel complete confidence in the ability or co-operation of the parents.

In conclusion, the case presented illustrates:

1. The usefulness of insulin in the treatment of diabetic acidosis and impending coma.
2. The ease with which the downward progress of the disease is arrested and a gain in weight established.
3. The rapid increase in the amount of utilized carbohydrate.

DISCUSSION

DR. COWIE: I am very much interested in the case that Dr. Montgomery has presented. It illustrates very well the antiketogenic action of insulin, which is, of course, certain, providing there is sufficient sugar utilized by or mobilized by the insulin. Dr. Montgomery has spoken about choosing the dose. It is a rather difficult thing to do. As we felt at one time, one unit of insulin would cover two grams of carbohydrate, and then later that one unit of insulin would cover one and one-half grams of carbohydrate, but we have found in other cases that one unit of insulin would cover many more carbohydrates than that, and others less. So there is no unanimity in the dosage. You cannot say that you must give so much because there are so many grams of glucose in the urine, although that is a very safe guide.

In the treatment of diabetes in children I think the thing to think of is this: Without insulin we have an absolutely hopeless disease. With insulin we have a disease in which there at least is some hope of continuing the patient's life. That being the case I thoroughly believe that our duty is to give all children insulin, because diabetes in children is always a serious disease. It is not like diabetes in the adult.

So I feel quite firmly that just as soon as you make a diagnosis of diabetes in a child you should try to work out the child's metabolism, his ability to handle carbohydrates. Be sure of that. And then just as soon as possible raise that child to a diet that will enable the child to carry on the normal activities of the child.

In other words, 30 grams of carbohydrates is not enough. Thirty-five grams of carbohydrate is not enough for a child, we will say, 3 years old, or 2 years old, to carry on all the activities of a child of that age, and we see to it at least that we furnish enough carbohydrate to the child to carry on the medium or normal activities of a child of those years.

So we now step our diet up to that point, giving enough insulin to cover the diet, completely watching the blood sugar until it gets down within the normal range, and watching the urine, but not trying to keep the urine always sugar-free, although in some cases that is very easy to do, in other cases it is very difficult to do.

You will find sugar in the morning urine in a large percentage of children and adults treated with insulin on sufficient carbohydrate intake to enable them to do their work or enable them to play.

Now what do we find after doing that? We find that after a while, before three or four weeks, down comes our insulin where it requires 60 units of insulin a day to completely cover the carbohydrate, plus the effort of the patient's own pancreas. Then as time goes on 55, 50, 40, 35, 15, 10 units a day, and in some cases in adults we have got it down to where it required 60 units of insulin a day to make that patient metabolize 40 grams of carbohydrate, where at the end of six days' time he could metabolize 80 grams of carbohydrate with two units of insulin a day. He was perfectly happy; eating all he wanted to eat.

They don't all get that way, but there are some that do. Children are immediately, within a comparatively few days, just as happy as any child, and it is a wonderful thing. The Central States Pediatric Society is going to come to Ann Arbor through the kindness of Dr. Cooley, and I hope to have the privilege of showing you some of these cases I have been talking about.

We have a group of children there who are the finest specimens in the world, no question about it, To see these children walk around you would naturally say, "That child is not a hospital case; he must be a school boy or girl coming in." They are the brightest, happiest children we have in the hospital; perfectly happy. If we can do that for them, it seems to me it is a wonderful thing.

DR. MONTGOMERY: I think the facts mentioned in discussion regarding the appearance of these children after treatment with insulin is the most striking thing about it. It certainly is different from what we used to see. Within a few hours, almost, they are up and around and playful. Really a most remarkable thing.

CLINICAL CASES

Reported Before Section on Ophthalmology, Oto-Laryngology, State Society Meeting, September, 1923.

Dr. John F. Rogers, Grand Rapids, presented a case of Foreign Body in the Anterior Chamber Removed by Magnet.

DR. JOHN F. ROGERS: This case is presented, not because of any very unusual features, but in the hope that a discussion of foreign bodies in the eye may be elicited.

H. R., employed by a local department store, received an injury to the right eye at about 4 p. m., August 2, while wielding a hammer and chisel, a small fragment from the hammer striking him in the eye. He was examined within an hour of the accident. At this time the following condition was found:

Considerable photophobia; eye injected, not very painful. Anterior chamber obliterated by escape of aqueous. A small, irregular corneal wound at 3 o'clock, extending across the limbus; above this the steel sliver, with its long axis horizontal and its point slightly imbedded in the iris.

The eye was thoroughly cocainized, the wound enlarged with the keratome, and then the point of the magnet placed against the lips of the wound, bringing one corner of the foreign body down adherent to the magnet. I did not use forceps, because in my experience you often shift the position of the foreign body and you may lose it behind the iris. In these cases where the foreign body is in the anterior chamber and easily accessible, I believe it is better to use a magnet in extracting the foreign body.

There was no reaction in this case and he had practically no pain. The eye was kept under atropin for a few days and he went back to work in about 10 days. His vision is now 6/6, and he has practically no trouble with the eye. The pupil is slightly distorted and there is a little intrusion of the iris, the foreign body being imbedded in the iris. But his vision is now normal.

ACROMEGALY

Dr. P. T. Grant, Grand Rapids, presented a case of Acromegaly with Optic Nerve Symptoms.

DR. P .T. GRANT: On June 16, 1923, Mr. J. W. consulted us on account of failure of near and distant vision.

He was 55 years of age; born near Grand Rapids and always lived in Michigan. Always had large hands and features. He had some of the diseases of childhood, but no serious sickness. His father died at the age of 82 of kidney disease; mother died at 84 of dropsy—he said. He has two brothers living; one brother died of scarlet fever and Bright's disease. One brother has always had large hands, but features seem normal. Two sisters living; one had a goitre which was operated. Both in good health at present.

Mr. W. has worn reading glasses for five or six years. Has been losing vision the past five or six months. His vision at the time he came to us was 20/200 O. U. This vision has improved to about 20/70 O. U. and 20/50 binocular. This improvement may be due to leaving off tobacco and alcohol. His fields were slightly contracted for color, but it was impossible to take the field owing to the fact that he had very heavy overhanging eyebrows.

There was no history of G-U disease; the Wassermann was negative. The pupils are normal and react normally to light; action of the muscles normal; no nystagmus.

On ophthalmoscope examination when we first saw him the right eye showed a piling of pigment between disc and macula; the center of the disc had no physiologic cup; we could not see that the disc was choked. In the left eye the nasal margin of the disc is obscured and there is elevation of the center of the disc, with arteries smaller than normal in proportion to the veins. There is slightly excessive pigmentation between discs and macula. We examined him ten days ago and the ophthalmoscope showed a distinct elevation of the center of the disc, although the margins of the disc were still clear. There is considerable improvement not only in the eye condition, but in the general health.

The treatment of this man, unfortunately, was carried on by a chirurgo-medical man, and he was not generous enough to tell me what he was doing for the man. His X-ray report is as follows:

> Examination of the single left lateral plate of the skull shows a very great thickening of the bones comprising the skull, and also obliteration of the sutures. There is an enormous frontal sinus present; the mastoid cells are clearly outlined and apparently negative. The lower jaw is rather thin between the upper and lower margin of the process, the chin projecting somewhat. The plate of the sella turcica shows some thickening of the posterior sphenoid process and a sort of ragged appearance of the anterior; the space between the two is not increased and sella is of good size and larger than normal. The sphenoid sinus is shown on the a. p. plates and this also is of good size and apparently clear. The plates taken of both hands show the enormous size of the phalanges, which are increased chiefly in width; the metacarpals are massive also; no appreciable change is seen in the carpal bones.

QUESTION: What does this patient weigh?

DR. GRANT: About 225 pounds. Of course, the bulging of the disc must be accounted for by increase in cranial pressure. If any of the men have had any experience with such cases I would be glad to have any suggestions in regard to treatment. I have had very little experience and know little about treatment.

DR. HOWARD W. PEIRCE: I would like to mention a case of acromegaly in which the only condition found was tinnitis. I am not ready to do more than mention the case because it is recent and has not been thoroughly studied . But it is a little unusual, I believe.

DR. HEMAN GRANT: Did this man have a loss of hair?

DR. P. T. GRANT: The man has a good growth of hair, a heavy growth, in fact. It is very coarse.

His history points to acromegaly started in early childhood. The development of his body would indicate that. His brother having large hands, but not large features, is interesting along that line.

DR. WALTER PARKER: I think the condition of the nerve head is very interesting in this case. In talking about pituitary tumors you must first separate pituitary involvement from neighborhood tumors, which sometimes can be done. We should decide whether it is a pituitary tumor, or a neighborhood tumor pressing upon the pituitary. If the nerve head is involved we get a paling of the nerve head. There is no definite field change with pituitary symptoms. A bitemporal hemaniopsia should be present, theoretically, but it is not always true. You more frequently find the slants that Cushing tells about, first for color and then for form.

I happen to have under observation at the present time a pituitary case which has a bitemporal hemaniopsia for green only; the other fields are practically normal. But there is always paling of the nerve head out of proportion to the diminution of vision. Occasionally there will occur an oedema in addition. What must have happened? Of course, the whole thing is extra dural before it breaks through, and you do get intra-cranial involvement with intra-cranial pressure, and your pupillary oedema is superimposed on that. It gives a clinical picture that resembles nothing else. But you look further for oedema and back in there you will see a nerve head that is atrophic. I feel quite sure that is what the doctor has. It means a late stage of the disease. Of course, the treatment depends upon whether you have hypo-pituitarism or hyper-pituitarism. I do not know much about any treatment except surgical. The surgical treatment of pituitary tumors depends entirely upon whether or not the patient is going blind. If the patient can hold his vision for a long period of time, he probably should not be operated. But the vision is the thing. If his vision is going down, if the nerve head is paling and the chances are he will be blind, I believe he should be operated. Whether the operation should be by the trans-sphenoidal route or the external route depends upon the surgeon himself. My opinion is that the trans-sphenoidal route is not used as often as the external route. Some of the results are perfectly startling. I had a case of a man who was entirely blind in one eye; his vision was 20/50 in the other eye. The eye which was not blind showed a temporal hemaniopsia. He refused operation at first, but when the vision in the second eye went down to 20/50 he consented. Cushing operated on him in 1913. In 10 days his vision was normal, and in three weeks his field was clear. I have had him under observation since that time and his fields are perfectly normal and his vision

is normal. After the operation he took 2½ grams of the whole gland over a long period of time.

Dr. de Schweinitz and Dr. Holloway have placed on record three cases where the fields have been made almost normal and the vision improved by the extract of the whole gland, and in any case where operation is not done I think the extract should be given.

I have been working for two or three years (but have nothing to talk about yet) on the pituitary gland as we see it throughout life. The symptoms which are referable to the pituitary gland in pregnancy are well known; they are fairly well known during the menopause; but they have been neglected in adolescence. There are four periods in a woman's life that are inter-related and similar in character: Adolescence, the menstrual period, pregnancy, and the menopause. At the time of the menopause the thyroid may become enlarged and there may be general glandular involvement; and if there is a physiological thyroid in children we think nothing of it any more. Why can not a physiological enlargement of the pituitary gland give the vague headaches that we have so frequently in girls, and why would it not account for occasional cases of headache and poor vision at the menstrual period in women who do not use their eyes at all? We all have had cases of women who become partially blind during the menstrual period, and we all know of cases where women go blind in pregnancy without nephritic symptoms. For the last four or five years I have been trying to get that group of cases together—women with protracted headaches during the menopause, and children during adolescence, giving them small doses of extract of the entire gland, and it is one of the most gratifying things I have ever done. I believe these are physiological pituitary changes. It might be occasioned by two things—a small sella or a large gland. The gland becomes involved, and then you have pressure symptoms. The only changes in adolescence seem to be toxic in character. You get a central scotoma, a retrobulbar neuritis. Later it seems to be more mechanical in character, and you get field changes that are quite typical of pituitary changes. It seems to me it is possible to tie these things up and have something to talk back on in those cases that have not been relieved by general treatment nor by repeated refraction.

PITUITARY TUMOR

Dr. Ferris N. Smith, Grand Rapids, presented a case of Tumor of Pituitary Operation.

DR. FERRIS N. SMITH: This patient, aged 35, came for examination in November, 1922, complaining of intense temporal headaches, progressive loss of vision, and also of complete blindness in the left eye. The only other findings of interest were historical—the fact that she had increased in weight considerably. There was a slight change in position of the clinoid fossa. The X-ray findings are quite typical of pressure in the sella. Another thing was the varying of the sphenoid .

The patient was referred to Dr. Parker at Ann Arbor for examination and confirmation of our findings, and he reported a probable pituitary tumor. He expected to send his chart of the visual field and eye findings, but I do not have this as a matter of record.

The patient was operated on the twenty-ninth of November by the transparietal route, and the tumor uncovered without much difficulty. However, it was impossible to remove the tumor by that route because of the continuous oozing through the arachnoid. We could not keep the area of the tumor dry enough to keep a lamp burning so we could see. The tumor was uncovered, and we loosened a tumor mass about the size of a large walnut, a flat, bluish, soft tumor. A pack was left in the cavity and a flap closed over it and the patient returned to bed. On Decmeber 9 the tumor was removed by the trans-sphenoidal route. A complete submucous resection was done, the middle turbinates removed, and the whole tumor mass dropped down and was removed with a snare and curette.

Following removal a 25-milligram tube of radium was left in the wound for six hours—150 milligram hours. Following the second operation the patient was discharged from the hospital on the eighth day, and about three or four weeks subsequently she was given 8,000 milligram hours of radium, 4,000 on each side.

Dr. McCrea reports the eye findings: Right eye, 6/5; left eye, 6/6; normal visual field; reads No. 1 Yaeger type on both sides. There is nothing further to say about the patient. Dr. Parker has discussed the points of interest in pituitary tumor.

There is one thing additional that I want to mention, in which I do not agree with Dr. Parker. He said that almost the sole indication of surgical relief was visual change and threatened loss of vision. I am quite sure he will agree that constant headaches which cannot be relieved demand surgical interference. Mrs. Keller's main symptom was constant, intense headaches and, of course, the minute loss of vision in the right eye and total loss of vision in the left eye demanded some interference.

DR. DON A. COHOE, (Detroit): I would like to ask Dr. Smith the type of headache from which the patient suffered. I think the type of headache, whether it is deep-seated, or whether it is a sharp, sudden pain, or a constant boring pain, has a great deal to do with making a diagnosis of intra-cranial tumor and differentiating it from other causes.

DR. SMITH: Mrs. Keller complained of constant, intense headache localized mainly in the temporal region. My own experience would not lead me to believe that the headaches are typical of the location or size of the tumor. I have a case of brain tumor in the hospital this morning in which there seemed to be diffuse headache—the woman is not clear enough to describe her symptoms accurately. But in other cases I have felt that headache was the most unreliable sign that I had to deal with—either the location or the type.

In this case the margin of the tumor was quite definitely attached to the sinus. I was able to enucleate it with my finger, and if it had not been for the oozing the tumor could have been removed at the first operation.

DR. L. W. TOLES, (Lansing): I would like to ask for the pathologist's report on the tumor.

DR. SMITH: Dr. Warthin reported a large adenoma. As you know, all these tumors of the brain undergo malignant degeneration, and that was the reason for the radium following operation.

DR. P. T. GRANT: How long had she been blind in the left eye?

DR. SMITH: I do not know, except that some eye men had been taking care of this patient for several months.

DR. P. T. GRANT: How long, following the radiation, did the vision come back?

DR. SMITH: I think the first we noticed was five or six days afterwards, when she could read coarse print with her left eye.

DR. P. T. GRANT: It is remarkable how these cases will regain vision after complete loss. The case I reported without any treatment regained central vision.

DR. SMITH: You would not expect, ordinarily,

that a blind eye would regain 6/6 vision.

DR. PARKER: The case I had did the same thing.

SARCOMA OF ANTRUM

DR. FERRIS N. SMITH: I have also two other patients I wish to present, one with sarcoma of the antrum, and the other with sarcoma of the tonsil.

Mrs. J. came to me in November, 1919, with a very large tumor mass on her face, producing considerable pressure on the right side of her nose and eyelid. On examination it was found that this mass involved the buccal soft parts, the entire alveolar process, the hard palate, part of the soft palate, the entire antrum and floor of the orbit. On section it was found to be sarcoma. The entire pathology was consequent upon the removal of an impacted tooth some years previous. The history was that it had grown slowly for some time, and a few months before began to grow rapidly. Obviously the thing was inoperable because of the very extensive involvement which would necessitate complete resection of the upper jaw. Mrs. J. was advised that the only possibility for her was radiation. She was sent to the hospital and given Cooley's serum over several weeks, commencing with a quarter-minim dose away from the tumor, and finally a one-half minim dose in the tumor, increasing daily. She was kept at a constant temperature of 103 and the treatment continued until she had a toxic myocarditis. Within six or seven days after the first injection there was a marked change in the size of the tumor, a progressive change until the Cooley's had to be abandoned. The soft parts had almost entirely cleared up and there was considerable change in the bone . The antrum was opened from the inside buccal surfaces and the tumor mass removed with a cautery knife, and the residual tumor mass cooked with a soldering iron. A few crusts adhered and she was treated on several occasions with radium. I would like you to come up and look at the antrum and see the condition now.

SARCOMA OF TONSIL

This little girl came to my attention in the middle of August, with a history that two months previous she had had sore throat with a small mass in the region of the left tonsil which the family doctor had diagnosed as peritonsillar phlegmon, which he incised, following which there was a rapid increase in the size of the mass. She was referred to a surgeon, who removed the tonsil and sent it for section. Dr. Warthin reported that the mass was a mucosarcoma, and she was sent to us for operation. There was a mass in the tonsil and palate about the size of an English walnut, and at the time of operation she had marked enlargement of the submaxillary lymphatics and in the region of the choroid angle. It seemed unwise, surgically, to attempt to remove the tonsil and palatal mass, but absolutely necessary to block off lymphatic drainage. On August 15 a block resection of the left side of the neck was performed, and subsequently small doses of radium put into the mass. Ordinarily when we radiate this sort of case with large doses of radium or X-ray we operate and then follow with further radiation. We have had one or two unfortunate experiences with block resection with the use of radium at the time of operation. There was sloughing in the region of the constrictor muscles and subsequent fistula into the mouth, with a fatal outcome. So I no longer have the courage to use large doses of radium at the time of radical resection. For that reason such treatment has been deferred in this case. Our further plan is to plant probably 15 or 20 spicules with radium emanation in this tonsil and palate and let it decay, and give her the maximum dosage of deep ray or radium externally.

One point in that connection which I would like to emphasize and which I think will become of more importance as it gains attention, is that in any of these cases of malignancy of the throat—and perhaps it is true of the whole body—where the toxic absorption has gone to the point where the creatinin index is around 3, it is foolish to proceed surgically or with radiation, because the patient is almost sure to die. I recently had a sarcoma of the tongue which was treated with two or three 12½ radium needles with a dosage of 150 millimeters. The patient died in a few days . He had a creatinin index of 3.8. That is one of several unfortunate experiences in a number of observations. So I would recommend that any of you who are treating these tumors with large doses of radium or ray, pay attention to the blood chemistry findings and the creatinin index.

TUBERCULOSIS OF SEPTUM

Dr. M. A. Farnsworth, Battle Creek, presented a case of tuberculosis of the septum.

DR. M. A. FARNSWORTH: This patient first came to my office on March 23, 1921, complaining that the left side of her nose had been stopped up for several weeks. Never had had any previous trouble. Her general health was good, but she had lost about 12 pounds in weight. She did give a history of having had flu a few weeks previous to coming to the office .

Examination showed a growth about the size of a dime on the anterior portion of the cartilaginous septum, just posterior to the muco-cutaneous juncture. In appearance it resembled a large seed wart. This was removed and the area cauterized with 40 per cent silver nitrate. The wound healed beautifully and the patient was asked to report for observation about once a month, which she did for about nine months. Then she failed to come in for three months.

The tumor was sent to Dr. Warthin at Ann Arbor for diagnosis. He reported it full of T. B. bacilli. She was then referred back to her general physician for further examination to see if we could locate any primary cause. The report was negative.

On March 12, 1922, almost a year after the operation, she returned, saying she believed the tumor was growing again. Examination revealed a growth as large as the original one on the left side and a small one directly opposite it, extending out into the right nostril. The patient was then taken to the ear, nose and throat department of the Battle Creek Sanitarium for consultation, being seen by Doctors B. N. Colver, C .G. Wencke and R. Runck. She was then referred to Dr. Pritchard for chest examination; who reported as follows: "Lungs show no active phthisis, but right apex shows an old thickening, which in all probability is a healed lesion."

It was then decided to excise the mass (as the infection would soon break down the septal wall), hoping to surround it and thus remove all the infected tissue. This operation I performed April 7, 1922, first removing the cartilage as for a submucous operation, with a swivel knife. Then with knife and scissors I removed all the mucous membrane from both sides of the septum, making one large perforation. The wound healed in the usual time and remained so till about October, when a small growth began to develop along the roof. Then she was given about a dozen treatments with the Kiomeyer lamp, which seemed to help some, and on May 18, 1923, it was decided to try radium. She

was given as first dose 25 milligram hours; and on June 15, 1923, 50 milligram hours. Since that time it has continued to improve until it now appears to be cured. At the same time we began giving her Mulford's Old O. T. Tuberculin, and she has now had 33 treatments. The patient says she had gained back the weight she lost before her first operation and that her general health has improved.

In looking over the records of other cases that have been reported, the consensus of opinion seems to be that radium is the best treatment for this condition, and if opportunity presents itself again I shall try the radium first before proceeding to operative measures.

SINUSES INVOLVEMENT

Dr. C. G. Wencke, Battle Creek, presented a case of Sphenoidal Sinusitis Without Involvement of Other Sinuses.

DR. C. G. WENCKE: The case that I have to present to you is one of sphenoidal sinusitis handled surgically, the approach being made submucously, by way of the septum.

In the study of sinus involvements in the clinic at the Battle Creek Sanitarium, we have been constantly striving to perfect a method by which we could approach and produce a permanent drainage of the sphenoidal sinuses without the destruction of any of the turbinal tissue, as it has been our observation that in cases where the turbinal tissue is removed to any extent the patient complains of varied and uncomfortable symptoms following the surgery. While studying out a method to accomplish the above results, we also came to the conclusion that it is just as logical to have a monosinusitis of the posterior group as it is to have one sinus involved in the anterior series, such as the maxillary. It is in this type of case, where you have only the sphenoids involved, the posterior ethmoids being free of any pathology, that this method of approach is applicable.

When we have a case of residual sinusitis involving one or both sphenoids, and believing that the deviated septum is a factor in the cause, we proceed with the ordinary submucous resection according to the usual technique. When the spine of the sphenoid bone is approached, the mucous membrane is elevated laterally. Then with a fairly sharp elevator, or with a knife, a vertical incision is made in the anterior bony wall of the sphenoid on either side of the spine. Then with a biting forceps the spine is removed. We found that such incisions make this latter step easier. We then proceed with a biting forceps, such as the Hajak, remove the anterior wall of the sphenoid down to the floor, sometimes using a chisel to remove part of the floor. In doing this at times we remove the rostrum of the vomer. All of the bone work being done submucously, there is very little hemorrhage and therefore, as a rule, one has very good observation. If it is desired at this point, the septum of the sphenoids can be removed and both cavities thrown into one large cavity.

The next step is to approach the anterior membranous wall of the sphenoid through the nasal cavity proper and make an incision horizontally, as high as possible, then with an incision downward from above, both laterally and medially, a flap of mucous membrane is freed the size of the opening in the bony wall. This is allowed to drop back into the sinus. The nose is then packed or not, according to one's preference following a submucous resection, and cared for post-operatively as a submucous resection.

It has been our observation that with this procedure we not only get a large opening in the anterior wall of the sphenoids, but as a rule this opening remains permanent. The middle turbinates are left intact, giving us the possibility of a normally functioning nose. The above procedure would not be applicable in an acute sinusitis, but where the condition has become chronic we have experienced no trouble in the way of intra-septal abscesses or other complications.

Case—

Miss S. In November, 1920, she complained of headache over the top of the head, especially in the morning and late afternoon; there was a dropping into the throat. She had frequent colds, with earache and deafness.

Examination showed septal deviation to the right; muco-pus coming from both sphenoids, seen with nasoscope. There was congestion of nosopharynx and pharynx. A diagnosis of bilateral sphenoiditis was made.

On December 10, 1920, a submucous resection and bilateral sphenoidetomy was done, the septa of the sphenoids removed. Following operation there was the usual relief of headache and other symptoms.

CHOLESTEOTOMA IN VITREOUS

Dr. R. D. Sleight, Battle Creek, presented a case of Cholesteotoma in Vitreous.

DR. R. D. SLEIGHT: This case was a man, age 71; no history of severe sickness. Urine, normal. Wassermann, negative.

About 10 years ago his eyes became blurred for about a month, then cleared up and he had no trouble until about one year ago, when he noticed the vision blurred in both eyes. This was about the first of June; I examined him on August 20.

I found his vision O. D. 20/100; O. S. 20/50. All external structures of the eye were normal; pupils react to light and are of normal size; field of vision contracted in both eyes, more marked in the right. Fundi examination showed, O. D., slight atrophy of the optic nerve, more marked at temporal side, and a few floating opacities in the vitreous. O. S., no atrophy of optic nerve, but a large number of white, glistening floating opacities.

The diagnosis was probable cholestrin, although these crystals may be tyrosin or phosphates.

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Report Malpractice Threats Immediately to Doctor F. B. Tibbals, 1212 Kresge Building, Detroit, Mich.

Editorials

A HAPPY NEW YEAR

With cordiality and sincerity do we extend to our members and readers our wishes for a Happy New Year. May we create about ourselves an atmosphere of courage and good cheer in which gloom and self-pity cannot thrive. May hope and joy and genuine contentment abound through this and all the coming years. That is our wish for you.

BURNS

The discussion of the subject of burns has been varied and of long duration. As a result it is found that a host of measures and a myriad list of all sorts of therapeutic agents have been recommended and extolled. The plan of treatment is different almost in every hospital. Every physician assumes a changing proceedure with every case. It seems that the lack of a general plan and the absence of an accepted routine has been created because we have not always borne in mind the changes produced in the tissues by extreme heat.

These changes vary in degree only and never in kind. They comprise:

Inflammation: Redness—First degree burns.
Exudation: Blistering—Second degree burns.
Suppuration: Infection—Bacterial.
Destruction of Tissue—Third degree.
Repair—Cicatrization.

Co-incident therewith in the second and third degree burns is shock and lung and kidney complications.

If one remembers these principles a rational, effective plan of treatment unfolds.

In first degree burns our attention is directed primarily to the relief of pain and the arresting of the acute errythemia or inflammation that exists. For this nothing seems to be so soothing and effective as an application of a 5 or 10 per cent aqueous solution of picric acid, followed by a light paraffin (plain) dressing well protected by cotton and a bandage. Prompt relief usually results and rarely is it necessary to give a sedative. Ten grains of aspirin affords pleasing comfort. As a rule, but one or two subsequent dressings are required.

In second degree burns limited to a hand, foot or a localized area, our treatment becomes somewhat more extended. The blisters should be promptly opened and blistered epidermal layer removed. It had better be done first for eventually this has to be done in two or three days. We must also guard against infection. Infection as a rule does not ensue from the bacteria on the part, these are destroyed by the heat causing the burn. Infection is introduced most commonly from the septic character of our dressings and ointments and oils used. The less we say about the carron oil, salves, lotions and wax found in dressing rooms and hospitals or first aid kits, the better. Our advice is to not use them. Remember, you are dealing with an open wound. Let aseptic and antiseptic principles guide you. Use sterile instruments, use sterile gloves on your hands and proceed as follows:

1. Clean thoroughly the adjacent skin and epidermal layer covering the blisters with benzine or ether. Paint surrounding skin with a freshly prepared, 3 per cent tincture of iodine.
2. Open blisters and remove all loose layers of epidermis.
3. Apply a 5 per cent sol. of picric acid.
4. Apply liquid paraffin that has been thoroughly sterilized by sufficient heat in a water bath. Apply with spray or a swab.
5. Apply cotton dressing and bandage.
6. In redressing, observe same careful technic.

Prompt relief, speedy repair, freedom from infection and no cicatrix or ugly scars is the rule. Your results are satisfactory in direct proportion to the care you manifest in the de-

tails of treatment. Relief and comfort attends speedily when your first dressing is applied.

In extensive second degree burns the dressing is the same except that it includes larger areas of body surface. However, here we are confronted with a complication of shock and the possibility of an acute nephritis, urinary suppression and lung involvement. The same principles that govern the treatment of shock prevails in burns as does in shock occurring from other causes. Abundance of water, subcutaneous and by proctolysis and by mouth must be given and continued. Rest in bed and maintainence of body temperature is also essential. A full initial dose of morphine and continued administration of morphine to keep the patient fairly well narcotized as recommended by Crile should characterize your treatment until the danger of shock has passed. This plan will also be most effective in preventing lung and kidney complications.

In third degree burns the treatment instituted in second degree burns, only intensified. includes the outline of your proceedure. The process of repair is treated the same as you would in the repair of any traumatic wound. Careful, detailed use of paraffin will, if persisted in, bring about satisfactory dermatization and lessen the need for skin grafting. It is well to remember that it takes time to complete repair. You cannot hasten it to any great extent. You must persist along the same line day after day and week after week. To abandon this plan of treatment is why infections, deformities, contractures and poor results ensue. Do not experiment around with the host of ointments and powders recommended. To do so you undo all that you have accomplished. The following of the outlined plan of treatment will, if attention is given to the details, secure the best possible results for you in your burn cases. We can attest to the satisfactoriness of these methods by reason of prolonged usage and highly satisfactory end results.

ORGANIZATIONAL WORK

Dr. Olin West, secretary of the American Medical Association, in a discussion of a paper on "Has the Medical Profession Lost the Position It Held?" presented before the Minnesota State Medical Society, makes some very pertinent observations and imparts wholesome advice. We are publishing his remarks with a recommendation that they receive thought and application on the part of our members, County officers and County Societies.

"I am one of those who do not believe that the real medical profession has lost in the esteem of the public, nor that it is without influence with the public. On the other hand, I believe that the true physician and the real profession which he represents stand higher in public esteem than ever before and exercise a greater and more helpful influence than ever before. The work and the benefits and the influence of scientific medicine have been carried to the neds of the earth, and in every land into which the light of civilization has penetrated the beneficent ministrations of physicians are being received and are gaining for the profession an esteem and confidence and influence greater than have ever before been enjoyed. Within the recent past I have had the privilege of exchanging greetings with a physician who does his work in far off Thibet, another who labors under a burning sun in tropical India, another from the remote recesses of interior Africa, and still another whose sphere of work is within the circle of the effulgent rays of the midnight sun. As I go about in our own country, I see great hospitals filled with those who believe and trust in the medical profession and turn to its members for aid when in distress by reason of disease, and I see other hospitals being erected by public subscription in order that the people may have the benefits of medical service under the best possible conditions. I see record breaking attendances at our society meetings and note what seems to me to be an air of unusual prosperity about those present. When I have opportunity to call on my medical friends at their offices, very frequently I find all chairs taken by patients who have to wait so long that one cannot doubt their entire confidence in the doctor for whom they wait, if not in scientific medicine in its entirety. The inquiries that pour over my own desk teach me that the people believe in the medical profession and in its ability to interpret and apply the fact and methods that scientific medicine has developed.

"If Dr. Savage will draw his strictures within somewhat closer lines and make his observations to apply in somewhat more narrow latitude I will be able to agree with him in most particulars. There are certain things about which we need to ponder and we do need to look ourselves as a profession squarely in the face and to heed some of the signs of the times. There are tendencies that need to be checked; there are, perhaps, some incumbrances which might be removed by an assumption of leadership which the profession has been slow to assume, though it seems to rightfully belong to it. It is undoubtedly true that individual members of the medical profession, some of whom are within the pale of medical organization, are guilty of reprehensible practices and that their transgressions bring reproach on the whole profession. Here is a job for medical organization to do, here is a reason for striving to perfect organization and for stimulating the zeal and efficiency of our component societies. In some spots our boards of censors and our councilors need to get busy. The membership of the American Medical Asociation, which is the combined membership of all of our state associations, was more than 90,000 on October 1. This peak will not be maintained, because many become indifferent or careless about maintaing membership and neglect to attend to the payment of dues until rather late in the year. We need some of those who are out, in; we also need to have some of those —a few—that are in, out. Then men who will not live up to the ideals of organized medicine, the men who violate the principles to which organized medicine holds, the men who will not subscribe to nor support the ethics of the profession and who will not live up to its traditions are not those about whom the protecting arm of our organization should be thrown nor to whom our recognition as an organized profession should be extended.

"Dr. Savage has offered some fine suggestions as

to what can be done along certain lines and I am glad that I can tell you that the American Medical Association is doing some of the very things he suggests. Some of these activities have been lately undertaken, some others are fairly well established. Hygeia, a journal of individual and community health, represents an effort upon the part of the Association to give to the public dependable information about the aims, purposes, possibilities, and even the limitations of scientific medicine. There is, it seems, some difference of opinion in the profession as to the wisdom of publishing such a journal. And, by the way, right there we encounter a difficulty which points out our need for more active, more earnest and more efficient medical societies, especially in our counties. It is extremely difficult, sometimes, even for those on the watch towers, to determine just where the weight of opinion lies. Better working societies would effect the crystallization of opinion so that surer guidance might be had. Hygeia now has a circulation in excess of 20,000. Some medical societies have subscribed for enough copies of the magazine to distribute it among all teachers, preachers and public officials within their respective territories. "Clip sheets" carrying abstracts of articles appearing in Hygeia are being sent to newspapers and other lay publications and are, to some extent, being used by them.

"The Bureau of Health and Public Instruction will, when the necessary organization can be perfected, prepare articles for the use of county or district societies to be published in newspapers. The matter of the preparation of articles to be distributed among newspapers all over the country is now being considered. Already a member of the editorial staff has written some articles of timely interest which have been distributed widely by a newspaper syndicate, which no doubt many of you have seen in print.

"The Bureau of Health and Public Instruction has also begun an effort to utilize the radio to good advantage. A representative of that Bureau has been on the program of Station KYW in Chicago several times and plans are being considered for extending this kind of service to other radio stations in a number of cities.

"The Bureau of Legal Medicine and Legislation, under the immediate direction of Dr. W. C. Woodward, is working might and main for protection of professional interests and for the public welfare. This Bureau is devoting itself to the study of legislation in which the medical profession is interested, whether for its enactment or defeat, and is lending all possible aid to the legislative committees of state medical associations. It is difficult to make the public or the members of legislatures understand that legislation proposed by our medical organizations is designed for the benefit of the people. I would not like to have public esteem for the medical profession measured by the response that we get in some state legislatures when we appeal to them for the enactment of laws which we sincerely believe will redound to the public good. Incidentally, if I may be permitted to give expression to a personal opinion, it appears to me that some of our committees offer too many bills. There is no virtue in superabundant legislation. The Bureau of Legal Medicine and Legislation has done some very effective work with government bureaus in Washington and is still struggling with them in an effort to secure relief from multitudinous rules and regulations that are confusing, if not oppressive.

"I have trespassed too long on your time and patience, though I would like to try to tell you of more of the work that is being undertaken by the American Medical Association. There is nothing that can take the place of scientific medicine. The profesison has but to deliver adequate service to those who are in need, whether they be rich or poor, great or small. It is the job of medical organization to help its members to deliver such service and there is much that our societies can do to that end if they will seize on the opportunities that offer."

PREVENTION AND RELIEF OF CARDIAC DISEASE

Under the auspices and initiative of the Association for the Prevention and Relief of Cardiac Diseases an extended survey of the school children of New York City has recently been completed. The results are startling, interesting and encouraging.

In the whole city, excluding the parochial schools, registration of 817,000 children is recorded. Of this total there are 5,719 with organic heart disease. Of this number there are but 60 who are not able to be about. The incidence of heart disease ranges from 1.5 to 2.0 cases in every 100 school children.

These children were segregated into special classes. They then received careful physical examination, etiologic factors were removed, dietary and physical training was instituted, and proper supervision of home environment was provided. This resulted in a marked physical improvement, arrest of the cardiac involvement, lessened absence from school, better school work and grade progress. Parents were interviewed, educated and instructed. The school day absence of the pupils were reduced from 39.9 days to 16.8 days per pupil. Children and parents were relieved of worry.

This certainly reveals a most commendable undertaking that merits emulation in all the schools of our country. We recognize that the examination of school children for physical defects is rather widespread. As a rule the work stops when an organic heart disease is diagnosed. We want more than diagnosis, for much can be done for these cases. What is needed is careful medical supervision and treatment—more cardiac clinics not only for school children but also for adults. The movement should be instituted and controlled by the profession.

SECRETARIES, ATTENTION!

The Council has determined that it would be inadvisable to conduct a conference of county secretaries during the month of January. It is recognized that such a conference, at that date, would demand a great sacrifice of time on the part of these county officers. Consequently the proposed conference will not be held until some date in the spring or summer.

COUNCIL MEETING

The mid-winter meeting of the Council will be held in Detroit in the Wayne County Medical Society Building on Wednesday evening, January 16, 1924 at 8:00 p. m., and January 17, 1924 at 9:00 a. m. for the transaction of such business as may properly come before the Council.

J. B. Jackson, Chairman.
F. C. Warnshuis, Secretary.

DUES

Yes, it's time again to pay your local and state dues. The state dues are five dollars. They are due now and are payable on January 1. Delinquents are removed from the membership roll on April 1.

We especially urge that all dues be paid promptly this of all years. The reason for promptness is that on April 1, there is to be a re-apportionment of delegates to the A. M. A. based upon the number of paid members reported by state societies on April 1. We stand to lose one delegate if we neglect in securing our full registration of members in good standing. Therefor, please pay your annual dues to your county secretary promptly —this month.

MEDICAL TESTIMONY

Courts trying criminal cases, and suits for recompense on account of bodily injury and Compensation Boards adjusting compensation for injuries sustained in the course of employment receive and weigh so-called expert medical testimony and opinions. In recent years some of this testimony has been given much publicity. By reason of the nature of some of this testimony the profession has sustained a "black eye" and individual chagrin occasioned because of the nature of the assertions and opinions that were advanced by these experts.

We quote the following from an article by Dr. Savage published in *Minnesota Medicine:*

"Who is there among us who has not blushed for his profession in listening to so-called expert medical testimony? A physician told me with pride of a case in court when he was to testify on behalf of the plaintiff. The papers had been drawn alleging an injury to the nerves of the leg. When the case was called for trial, this doctor found himself opposed by one of the leading neurologists of the state. He then instructed the attorney for the plaintiff to change the pleadings to show the case to be one of injury to the ligaments. The neurologist was left high and dry; and the proceedings being held many miles in the country and no surgeon being available, the doctor won the plaintiff's case. It is unnecessary to burden you with additional examples. Hennepin County made an effort to correct the disrepute that has fallen upon the medical profession on account of expert medical testimony. The proposal was that each member of the Hennepin County Medical Society who might wish to testify in court should sign a card indicating in what subject he considered himself qualified to act as expert witness. By mutual agreement of opposing counsels three physicians were to be selected who had qualified in the specialty under which the case would fall. This medical jury of three, paid jointly by opposing sides, was to bring in the medical verdict. I understand the procedure has not been popular with the lawyers of Hennepin County. In discussing this with a lawyer, he said he thought the procedure never would be popular with the legal profession because it deprived the lawyer of his prerogative of bringing out all available testimony on cross-examination.

The following paragraph was written by Dr. S. Marx White and is taken from the report of your Committee on Public Policy and Legislation: "Only by a mechanism which will remove the temptation to modify testimony for gain, and make the expert an officer or employe of the court, instead of the litigants, will it be possible, in the opinion of your committee to do away with the many and serious evils of present day medical testimony."

Editorial Comments

Here is an apparently sane attitude that might well be adopted by our County Societies and the State Society. It is extracted from a report of a committee rendered to the Minnesota State Medical Society and adopted.

"In presenting these resolutions, the committee does not wish them to be construed as in any manner showing a lack of appreciation of the valuable work of health organizations, or a lack of sympathy and desire for co-operation on the part of the medical profession, but rather as a sound working basis for greater harmony and fullest accomplishment. In order that the resolutions may have real force, they have been constructed on the principle that, while we assume no right to dictate to any health or social organization, we have the right to adopt rules governing the conduct of our own members.

"1. Resolved that no physician engaged, or associated with men engaged in private or consultation practice, shall become associated in any manner whatsoever with the establishment and maintenance of any new, free, permanent clinic or dispensary until such project receives the sanction and endorsement of a duly authorized committee of the county medical society in which such proposed clinic or dispensary is to be located.

"2. Resolved that no physician engaged as specified above shall associate himself with or become a party to any health or social organization engaged in the establishment and maintenance of permanent free clinics or dispensaries unless such organization maintains a social service investigation department of sufficient scope and efficiency that it can exclude from such free service individuals who are able to pay. The efficiency of such a department shall be determined by a duly authorized committee of the county medical society in which county such clinic or dispensary is conducted.

"3. Resolved that no physician engaged as above specified shall be a party to, or in any way associated with any voluntary organization conducting clinics or dispensaries of any type whatsoever where any compensation is accepted from the patient for medical services rendered.

"4. Resolved that no physician engaged as above specified, shall in any manner be associated with

any voluntary health organization making unsolicited visits in the home in case of sickness, or where there is a newborn child, unless such organization shall first confer with the attending physician, if there be one in charge of the case.

"5. Resolved that the responsibility for the carrying out of all of the provisions set forth, or for infringements thereon, shall lie directly with the physician involved. A plea of lack of knowledge shall not be considered a valid excuse, as it is incumbent among physicians, especially those engaged as clinicians or associated with public health or social organizations, to see that the work of their organizations does not unfairly infringe upon the rights of physicians in private practice.

"6. Resolved that because of the very close association of the work of the practicing medical profession and the public health organizations, it is desirable that, whenever possible, the county medical society in which county such organization is located, should have official representation on the governing board of such organization.

"7. Resolved that each county society be requested to appoint a committee on public health and publicity matters; this committee to be prepared to carry out the provisions of the foregoing resolutions, and to co-operate in a prompt and efficient manner with the public health activities of the county, also to co-operate with the Statewide Publicity Committee in their plans.

"8. Resolved that the secretary of this association be instructed to forward to each county society a copy of the above resolutions."

Are we having too many scientific papers read at our medical meetings? Would it not be better to have more clinical reports, case demonstrations and discussions? Are we not plentifully supplied by our medical journals with every sort and type of scientific articles so that we can read them at leisure? Will we not secure more practical help from a clinical case? This is something for secretaries and program committees to think about when arranging the scientific work of their Society.

Clinical groups and clinic corporations cannot violate our rules of conduct with less fear of being judged than can the individual doctor.

Unwarranted publicity campaigns on the part of groups and clinics are as censorable and amenable to penalization as is such activity on the part of individuals. Censorship and ethics committees should bear this in mind. Charity or semi-charitable purposes do not justify immunity. A group has no more license to ignore principles than has the individual.

The Council and the Committee on Public Health Education will hold a combined meeting and conference in Detroit on January 16 at 12 M., at the Wayne County Medical Building. In the evening the Council and the members of the Committee will be the guests of President Connor at dinner.

Did you ever employ a carpenter, painter or plumber and receive his bill? Well he doesn't forget to include every item. Supposing we rendered our statements likewise—they would then read like this:

To time doing dressing, 20 minutes @ $5.00 per hour	$1.67
¼ yard gauze	.08
½ oz. alcohol	.30
1/16 lb. cotton	.04
5 yards bandage (gauze)	.12
1/12 foot adhesive plaster	.01
1 safety pin	.01
To services of helper (nurse)	.75
Total	$2.98

Of course $5.00 per hour rate is only arbitrary and used for illustration. The union scale would be $10.00 to $15.00 per hour. What do you think?

It seems to be wise and desirable that some general rules should be adopted governing the work of Clinico-Pathological and X-ray laboratories. The one vexations point is that anyone can go to one of these laboratories and have an analysis made or an X-ray taken and secure the report. True some directorates decline and only make the report to the family or designated physician. There are many, however, who sell their services regardless and see only the fee and not the ethics of the situation. The New York County Medical Society has formulated such a code. We in Michigan, might well follow the example. Then let us patronize the laboratory that renders service and is not solely a commercialized organization.

The Journal commences a new volume with this issue. No change occurs in its mechanical make-up and appearance. We are adopting a policy of printing reading material in our advertising pages. This is done to draw greater attention to our advertisers and to encourage your patronizing them.

Well, sure, its a Happy New Year and many of them. You have it in your power to determine in a large measure, the degree of your happiness. That happiness will be greater if one of your resolves includes being a better doctor, rendering better service and keeping up with the progress of medicine. The people demand service of a high type and unless you render it they are going to secure it elsewhere.

To those men, located at a distance from a laboratory, there need be no discouragement or feeling that they cannot treat their cases of diabetes. The discovery of insulin has not deprived you of further care of diabetics. On the contrary you will be called upon more frequently to supervise the care and treatment of diabetics. Insulin is a dangerous remedy. So is arsenic, thyroid extract and pituitrin. Insulin can be used with safety if you but become familiar with a few general principles and rules. From 75 to 80 per cent of your diabetics will not require insulin. They can be made sugar free and take in 2,000 calories of food value if you but learn the newer principles of feeding and proportioning of carbohydrates, proteins and fats. In the other 20 per cent of cases and in the emergencies of diabetic coma and pre-coma the use of insulin can be resorted to with safety if you will but take the pains to learn the rules of administration. We urge that you familiarize yourself with the literature and become proficient in the modern treatment of diabetes.

We congratulate and are proud of our Michigan hospitals. In the report of the last survey we find them all in Class "A"—100 per cent. Having made the requisite grade of the minimum standard of hospitals and instituted the needed changes and reforms in so far as equipment, keeping of records, diagnosis and the employment of laboratory measures to confirm diagnosis, and having provided for the continuance of these standardized procedures, is it not now time that we concentrate upon another feature of hospital activity? We refer to the training school and nursing problem. Let us not go off on a tangent and over-standardize so that we

lose individuality on the part of both patient and medical attendants. Let us foster personality and initiative to a reasonable degree. Let us prevent hospitalization from becoming too much like "Ford production." Let us not put all our patients on a mono-rail track. Let's breathe for awhile at our present point of efficiency, and while breathing, shall we not become concerned about standards of nursing, nursing requirements and training? This is a complicated condition requiring much thought and investigation before reaching a solution is possible. We may well start in to bring about a reformation now, for eventually we will be pressed to do so.

Naturally we expect complaints to reach us and they do. Some are groundless, others trivial and again others are based on only personal differences between two persons. There is, however, one complaint that comes up continuously and of late more frequently and from many more sources. It is concerned with finances and charges made by doctors and eminates from layman. This days mail brings in three that are summarized as follows:

1. Working girl, in a hospital for two weeks. Hospital bill was $46.00. All the money she had was $43.00. The hospital takes the $43.00 and her watch as security for the other three dollars.
2. Servant girl, earns $12.00 per week. Has acute mastoiditis. Is operated on and surgeon sends bill for $300.00. It was compromised for $100.00.
3. A woman, having an acute coryza, requested a treatment from a doctor. Her nose was sprayed and an application of a solution of argyrol made. No other examination, no laboratory work, nothing else was done. She was asked and paid $10.00 for this service. She earns $24.00 a week.

Are we not becoming commercialized when such practices are being put over on the people? Are you doing the right thing when you overcharge?

Apropos of the discussion of iodine in the treatment of goitre, it may be observed that the iodine therapy is not new. In 1500 B. C. the Chinese used marine plants and sponges. In the 13th century Villenenwe treated goitre by means of powdered calcinated sponges. Empirical we admit for it was not until 1819 that Straub of Berne discovered that iodine constituted the active principle of the calcinated sponges and the marine plants. The Chinese prescription in 157 B. C. recommended: "To cure goitre, take a pound of marine plants; wrap in a piece of silk and dip into ching of wine. In spring and summer take twice a day, and in autumn and winter three times." Probably not as tasty as our iodized chocolate tablets, but evidently effective. What is new under the sun?

The treatment of goitre and thyroid intoxication has not reached a positive basis. Not so very long ago we were all severely condemned if we attempted any therapeusis or the administration of iodine. Especially was this true of exophthalmic goitre. But times change and experiences change also. We now are beginning to receive reports on the use of iodine as pre-operative treatment for toxic goitre. One man reports on 100 cases and states that in 75 per cent of them, the administration of Lufol's solution obviated the need of preliminary ligation and that resection was done in one operative sitting. He observes that in these cases the toxic condition improved, exophthalmos diminished or disappeared and a markedly lowered pulse was noted. We know that in certain clinics some intensive work is being done preliminary to making reports upon the value of iodine therapeutics. If the intelligent use of iodine makes for safer, less complicated surgery, we trust an early day will witness a pronouncement of safety.

Another resolve should include a determination to attend your county meeting regularly; to determine to visit some clinic or attend some postgraduate course at least on two occasions during the year. You need the inspiration and instruction of such a "brushing-up." Then, also plan a definite vacation period so that you can play. If you do this, a year hence you will be happier and you will be a better, healthier doctor.

By reason of the splendid work done by the Committee on Exhibits of the Kent County Medical Society of which Dr. A. V. Wenger was chairman, a net profit to the State Society of $643.57 was turned into our treasury. This materially reduced the expense of our annual meeting.

One of the things that drives patients away from the regular profession and into the hands of cult representatives is the removal of appendices in which the patient is no better after the pomp and circumstances of a surgical operation. Worthless appendix operations are performed every day. Would it not be wise to carry our investigations a little further before urging operation for that "chronic pain" in the right side?

In the diagnosis of heart disease one does not consider physical signs alone, or signs combined with symptoms. Neither does one judge alone the response of the heart to exercise. In themselves they are not sufficient. One must consider all of them and in addition, the whole individual, body and soul together. There is many an erroneous diagnosis of heart disease that was based on a single sign or symptom. That is why our batting averages are low when we are checked up by one who is complete and thorough in the making of his examinations.

The census bureau has just issued some figures on automobile fatalities for 1922. During the year there were 11,666 deaths, a death rate of 12.5 per 100,000. In Detroit there were 176 deaths, a rate of 17.7. Grand Rapids 23, a rate of 16. For the state there were 574 deaths, a rate of 14.8. New York, New Jersey and California had rates of 16.7, 16.4 and 26. There were 960 deaths in California.

The question arises, are these deaths all due to careless, reckless driving? Does not defective vision play an important role? Is it not time that the issuance of a driver's license should depend upon the driver's acuteness of vision, rather than upon the fee he pays?

Please do not neglect prompt payment of your 1924 dues. Lighten the work of your County Secretary by sending in an early remittance. The state dues remain the same—$5.00. You are "posted" and in "disgrace" if you fail to pay your club dues promptly—why feel different to your Medical Society dues?

The greatest number of bad results in fracture cases are obtained from failure to recognize that a fracture is present. This is due to incomplete examination and failure to obtain X-ray plates. It must be remembered that the old text-book signs of crepitus, deformity and undue mobility do not always present. You can have a fracture without them. Loss of function does not always ensue. With a history of trauma and the presence of tender-

ness, it is well that an opinion be not expressed until an X-ray has been made. You cannot afford to "guess" or take a chance.

State News Notes

COLLECTIONS

Physicians' Bills and Hospital Accounts collected anywhere in Michigan. H. C. VanAken, Lawyer, 309 Post Building, Battle Creek, Michigan. Reference any Bank in Battle Creek.

For Sale—Wall plate, surgical instruments, Harvard chair, dressing table, solution table, mailing cases, microscope and drugs of the late L. P. Parkhurst, M. D. Mrs. L. P. Parkhurst, 246 La Grave Avenue, Grand Rapids, Michigan.

On receipt of the Kentucky State Medical Journal, we learn this month, that Dr. J. B. Kennedy of Detroit was elected an honorary member of the Kentucky State Medical Society at its last annual meeting.

Dr. A. H. Welsh of Tuscon, Ariz., has located in Grand Rapids.

Dr. A. H. Williams, Grand Rapids, attended the annual meeting of the Radiological Society of North America, held in Rochester, Minn., the week of December 3.

Dr. Wm. Tappan of Holland was elected Commander of the local Post of the American Legion.

Dr. T. A. McGraw, Detroit, announces the removal of his offices to the David Whitney building. Practice limited to endocrinology.

Dr. H. S. Collisi, Grand Rapids, announces that he will limit his practice to surgery and obstetrics.

Dr. J. D. Brooks, Grand Rapids, was operated upon for chronic appendicitis on November 30. Dr. Max Ballin was the attending surgeon.

Dr. J. S. Pritchard addressed the Kent County Medical Society on November 29.

Doctor, we cannot record interesting news items unless you send them. They should reach us not later than the 15th of the month.

Dr. H. M. Blackbourne, Grand Rapids, has taken a years associate service in diseases of the ear, nose and throat with a leading clinician in Chicago.

Dr. B. R. Corbus, Grand Rapids, attended the annual meeting of the Montcalm-Ionia Medical Society on December 13 and read a paper on Insulin.

Dr. J. F. Cardwell, Grand Rapids, is spending the winter in Florida.

Annual meetings of County Societies are being held. Reports of these meetings, reports of committees and names of officers elected are desired for publication in the Journal. Other Societies want to know what your Society is doing. Please send in these reports and thereby enable us to impart the information.

The Michigan Hospital Association will hold its annual meeting in Grand Rapids the last part of January.

Yes, we miss the news items of the Detroit profession. Will not some member from Detroit volunteer as correspondent?

A copy of **Le Proges de la Cote D'Or,** a daily newspaper published in Dijon, France, received by Colonel Angus McLean contains a lengthy account of an Armistice Day celebration at the **Foyer du Soldat** in that city at which honor was paid the members of Base Hospital 17 (Harper unit) which was stationed in Dijon for more than a year and a half under the command of Colonel McLean. At the celebration in the **Foyer,** which is an institution similar to our war time Y. M. C. A. army huts, various military and civil officials of Dijon and the department of Cote D'Or spoke of the pleasant relations that obtained between the members of the American units stationed in Dijon and the French civilian and military population of the city and its vicinity. Particular reference was made to Colonel McLean and the members of his command and a feature of the evening was the showing of a large stereopticon view made from a group photograph of the personnel of Base Hospital 17. The account concludes with the statement that those present drank a toast in champagne to the members of Base 17.

The following officers of the Staff of Base Hospital 17 exceedingly regret that they did not participate in the drinking of the toast:

Col. Angus McLean, Maj. George E. McKean, Maj. Thomas K. Gruber, Lt. Col. Preston W. Hickey, Lt. Col. Harry N. Torrey, Maj. Lauis J. Hirschman, Maj. Ernest K. Cullen, Maj. Walter D. Ford, Maj. Robert G. Owen, Lt. Col. Rolland Parmeter, Maj. Wm. A. Spitzley, Maj. John C. Dodds, Maj. James F. Breakey, Maj. Albert D. LaFerte, Capt. Edward J. O'Brien, Capt. Bruce C. Lockwood, Maj. Duncan A. Campbell, Capt. Hampton P. Cushman, Capt. Percy L. Belt, Maj. Frederick G. Buesser, Maj. Alexander M. Stirling, Capt. Wm. T. Shannon, Maj. Earl C. Barkley, Capt. P. L. Pound, Capt. Hugh A. Sullivan, Capt. James B. Seeley, Maj. B. H. Larsson, Capt. Harry A. Dibble, Lt. Col. Wm. H. Honor, Capt. A. E. Catherwood, Capt. Theodore H. Smith, Mac H. Wallace, Chaplain.

The many members who have attended meetings of the A. M. A. will be grieved to learn of the death of William Whitford. Mr. Whitford has reported sessions of the A. M. A. for 35 years. His death occurred at Oak Park, Chicago on December 10.

The next annual meeting of the A. M. A. will be held in Chicago, the week of June 9.

The Faculty of Detroit College of Medicine and Surgery presented the Board of Education of Detroit with a portrait of the late Dr. Ernest Keys Cullen.

Dr. Cullen was formerly Professor of Gyneacology at the Medical School, also attending Gyneacologist at Receiving and Harper Hospitals and served in the A. E. F. Base Hospital No. 17 for about two years.

The Board of Education accepted the portrait with much appreciation and has directed the Dean of the School to have said portrait placed in the School Library.

The American Association for the Study of Goitre, composed of Goitre Surgeons, Internists, Anaesthetists, Pathologists and Radiologists, will hold its

annual meeting in Bloomington, Ill., January 23, 24 and 25.

The 23rd, will be devoted to operative clinics, featuring local anaesthesia and gas anaesthesia. The scientific session will begin the morning of the 24th.

Among those upon the program are Doctors Andre Crotti of Columbus, Ohio, William Seaman Bainbridge of New York City, W. Wayne Babcock of Philadelphia, F. H. Lahey of Boston, Wm. Englebach of St. Louis and Dr. Loyd Arnold of Chicago.

Those interested should communicate with Dr. E. P. Sloan, president, Bloomington, Illinois, or Dr. Judson D. Moschelle, secretary, Indianapolis.

Deaths

RESOLVED: That in the tragic death of the late William Samuel Shipp, M. D., the Michigan Board of Registration in Medicine has lost a most efficient, capable, and much beloved member. From both a mental and physical standpoint Dr. Shipp's make-up emphasized all those attributes of heart and mind which are part and parcel of the ideal citizen and physician. In his relations with his patients, his friends, and the public, these unusual attributes were always in evidence.

His tragic death was directly the result of his conscientious application to principle involved as a member of and chairman of the Draft Board of his county during the Great War, which in effect constitutes a Supreme Sacrifice.

Authority is given by the state to the Board of Registration in Medicine to render judgments involved in medical practice and conduct, therefore its members are of the unanimous opinion that Dr. Shipp's heroism should receive suitable post-recognition by the government for notable services rendered the United States during the stress of the Great War.

The death of Dr. L. P. Parkhurst, Grand Rapids, has been reported. The Doctor was born in 1865 and died at the age of 58 years. He was a graduate of Rush Medical College.

The death of Dr. A. E. Bonneville, Alpena, has been reported. He was born at Bresler Falls, N. Y., and received his medical education at the University of Paris and the Physicians and Surgeons' College of Chicago. In 1896 he located in Alpena.

The death of Dr. James A. King, of Manistee, for many years a member of the Manistee and Michigan State Medical Societies and a graduate of the University of Michigan, has been reported.

County Society News

GENESEE COUNTY

The Genesee County Medical Society met for noon luncheon at the Hotel Dresden, November 14, 1923.

Dr. C. D. Camp, Professor of Neurology, University of Michigan gave a very interesting talk on "Mental Disorders Simulating or Reinforcing Physical Invalidism." This subject is one which should be a very important one. On the standpoint of efficient care of patients with physical ills, too little attention no doubt is given to it, and as a result a great many of our patients consult chiropractors or some other one of the cults. A free discussion followed.

The Genesee County Medical Society met for noon luncheon at the Hotel Dresden, November 28, 1923.

Dr. Warfield, Professor of Medicine at the University of Michigan, addressed the Society on "Arterio Sclerosis." This was a very instructive and practical subject. Dr. Warfield is well qualified to talk on this subject inasmuch as he has done a vast amount of research work in this direction.

The Genesee County Medical Society met for noon luncheon at the Hotel Dresden, December 12, 1923.

Dr. Phil Marsh, Instructor in Medicine at the University of Michigan and in charge of the work on Diabetes at the University Hospital, gave a very interesting talk on "Non-Diabetic Diseases of the Pancrea." G. J. Curry, Secretary.

HOUGHTON COUNTY

The Houghton County Medical Society met in November and December. A part of the program in November consisted of symposium on Typhoid.

Dr. Frank Marshall presented "The Recent Epidemic in L'Anse," and emphasized its explosive occurrence—confinement to the school children almost entirely and the probable source of the disease coming from the influx of new labor and the contamination of a small strain, the water of which the children had used for drinking purposes on the opening of the new school year.

Miss Mills of the Health Department spoke on "Laboratory Diagnosis," and Dr. J. E. Scallon on the "Full Diet in Typhoid," emphasizing the use of grated apples and nuts as a part of the dietary regime.

Dr. W. K. West gave the history of a case of Pancreatic Cyst with operative interference and recovery of the patient. Discussion brought out that sudden death may be caused by hemorrhage in acute pancreatitis.

In December Dr. P. D. Bourland, who was in Germany during the months of July and August, addressed the Society. The doctor visited the hospitals in all the larger German cities and found a woeful lack of material to carry on the work. Nearly all the hospitals needed a replacement of instruments, a refurnishment, a redecoration, and a general rehabilitation.

He spoke of the Medical Profession as carrying on an increased amount of work with the greatest economy and a spirit of self sacrifice and with hardly enough remuneration to keep themselves and families existing properly. And he spoke in behalf of the profession in Germany as needing all the assistance and aid that could be given them.

Christmas Greetings and a sincere wish that the Secretary, Journal and its Staff, and the whole medical profession be blessed with happiness and health during the coming year.

Very truly yours,
Houghton County Medical Society,
C. E. Rowe, Secretary.

KENT COUNTY

The Kent County Medical Society held its annual meeting on December 12. The retiring President, R. J. Hutchinson delivered a splendid ex-augural address. Reports of standing committees were received and acted upon. The Secretary's annual report revealed 178 paid-up members.

The following officers were elected for the coming year:

President, W. E. Northrupp; Vive-President, Alex Martin; Secretary-Treasurer, F. C. Kinsey (re-elected); Medico-Defense, G. L. McBride; Delegates, A. V. Wenger, J. S. Brotherhood, H. J. Beal, G. H. Southwick.

(Continued in Advertising Section pp. XVIII.)

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Original Articles

CLINICAL TYPES OF GOITRE WITH SPECIAL REFERENCE TO THE ADENOMATOUS TYPE, WITH DEMONSTRATION OF CASES*

HENRY J. VANDEN BERG, M. D., F. A. C. S.
GRAND RAPIDS, MICH.

In discussing clinical types of goitre it is necessary to know what is meant by the terms applied to various types of goitres. It has been difficult to get a working classification that is definite because of the many variations and combinations of types, and because of the changes from one type to another. For all practical purposes, however, three types are recognized—namely, simple or colloid goitre, the adenomatous type (or probably mixed), and the exophthalmic type.

The simple or colloid type is usually seen in adolescence and rather frequently during pregnancy, and at times at the menopause. This occurrence is probably not a happenstance, but likely indicates a gonad relationship. In the majority of cases there are no toxic symptoms or signs, but there may be a slight to a moderate degree of intoxication. The gland is fairly uniformly enlarged, retaining the normal contour, because every alveolus is increased in size from distension with colloid. It is Marine's theory that the iodine concentration is low and, therefore, upon administration of iodine the concentration is increased with consequent reduction in the amount of colloid. We know that this type is satisfactorily treated by the administration of iodine in some form. The basal metabolic rate is usually normal, or only slightly above.

The exophthalmic goitre presents the other extreme in the matter of toxicity. It occurs much more frequently in women than in men. The average age of the first appearance of toxic symptoms is in the early 30's. The clinical course is variable but definite and progressive, usually with remissions and exacerbations. The onset is usually insidious, increasing gradually for a period of months, at the height of which the so-called crisis is reached. It may run a chronic course without the development of a true crisis. In some instances it appears quite suddenly in its fullest intensity. The symptom complex is one of intense general intoxication affecting principally the nervous system and secondarily the heart and other vital organs. The degree of invalidism is dependent upon the severity of the attacks, which in turn determine the extent of the degenerative changes in the vital organs (nervous system, heart, liver, kidneys, pancreas, endocrine glands, et cetera). I do not intend to mention all the symptoms and signs usually enumerated, but I wish to call your attention to a few that are not frequently mentioned, yet very important; 1st, loss of weight, despite a normal intake of food or an amount even in excess of normal, due probably to the increased metabolism which ranges anywhere from plus 30 to plus 150 or more. 2nd, in the absence of a bruit one should hesitate to make a diagnosis of exophthalmic goitre; 3rd, there is no tendency to hypertension—the diastolic pressure is low, consequently the pulse pressure is high; 4th, in slightly toxic cases the forceful quality of the first heart tone is very important. In my experience, this sign is valuable in the differential diagnosis where tuberculosis or the neuroses may have to be considered.

The gland may not be, but usually is slightly or moderately enlarged. If enlarged, the symptoms usually develop with the enlargement. The consistency and general feel resemble that of the normal gland. In the treatment of this type of goitre the best results are obtained through surgery.

The adenomatous goitre occupies a position in toxicity midway between the simple or colloid goitre and the exophthalmic type. The average age of the first appearance is in the early 20's, but the first symptoms of intoxication appear about 15 years later. The clinical course is somewhat variable, but much less so than in the exophthalmic type. The tendency is to be progressive without remission. Thyroid enlargement has usually been present for years when symptoms are first discernible. They are usually nodular, therefore, asymmetric in

*Read before Section on Surgery, Grand Rapids, September, 1923.

shape, although at times the normal thyroid shape may be retained. They are extremely variable in size and somewhat so in position. I have seen them encircle the trachea completely. The intra-thoracic position is, of course, not uncommon. There may be only a single adenoma located in the median or in either lateral lobe. They are, however, usually multiple and in the lateral lobes, and are found more particularly in the lower poles. They may undergo almost any form of degeneration, cystic, hemorrhagic, calcareous, malignant, or a combination of these. The form of degeneration will determine the feel and consistency and this is extremely important in relation to malignancy. A thrill and bruit are usually absent; tremor is seldom present and less marked and exophthalmus rarely occurs; there is a tendency to hypertension; the diastolic pressure is sustained and the pulse pressure is normal; the basal metabolism seldom goes over 50 plus. According to Plummer this type becomes toxic in 23 per cent of cases. The toxine, however it may be elaborated, seems to have a selective action for the myocardium; the nervous system to a lesser extent. The adenomatous goitre might be called the myocardial type just as Grave's disease is known as the exophthalmic type. Frequently early cardiac changes may be demonstrated in the absence of the ordinary signs of toxic goitre. Not infrequently patients seek relief from grave cardiac manifestation without having the faintest suspicion that their trouble is of goitre origin. This etiological relationship may perplex the physician also. The heart has great reserve force, therefore considerable damage can be done before cardiac embarrassment appears. If this is true, who can say in any given case whether the goitre (adenoma) is exerting a damaging effect or not. When then shall we advise removal of an adenoma? I believe it should be done in all cases after 25 or 30 years of age unless contraindicated. The presence of an adenoma is as gross an evidence of potential danger as obesity is of endocrine disturbance, both serious and both very much neglected. There are other good reasons for removing adenomas. The general toxicity affects the nervous system, and, in fact, all parenchymatous organs. Ninety per cent of all malignant tumors of the thyroid arise in the adenomata (1.8 per cent of thyroid cases are malignant), 6 per cent produce pressure symptoms of one kind and another. They tend to produce hypertension, and nearly all exhibit some deformity, altogether more than sufficient reason for more serious consideration than is generally given the adenomatous type. Since the operative hazard is slight, why not remove the cause before damage to vital organs is done?

CASE EXHIBITS

Case No. 1. Maiden lady of 62 who has had a goitre for years which bothered slightly five years ago, but soon became quiescent. Since then she has been fairly well until present trouble which began in June, 1921 with palpitation, increased nervousness and loss of weight. She was treated medically and had a few X-ray treatments with unsatisfactory results. There was some loss of weight during this time, with appetite poor. For two months had been bed-ridden. The thyroid was moderately enlarged, irregular in contour, no suggestion of malignancy, no thrill or bruit, slight exophthalmus, a coarse tremor, nutrition rather poor, heart slightly enlarged, rate around 90. Blood pressure 200-120. Operation June, 1922, partial lobectomy both sides and each side was about the size of a tangerine. Pathological report "multiple adenoma with small area of thyroiditis." Complete recovery and improvement. Has gained strength and weight. No palpitation and has normal sensitization. No tremor. Sleeps well. Seems to be quite normal in every way.

Case No. 2. Widow, aged 58. Occupation, housework and laundry work. Presented herself in October, 1921 complaining of palpitation, nervousness and fatigue for several months. Some loss of weight although the appetitie was normal. Goitre has been present since 15 years of age. The enlargement was confined to the right lower lobe. No thrill or bruit. No eye signs. Heart rate was 110. Apex four finger breadths wide. Systolic murmur at base and along left sternal border, probably functional. No hypertrophy. Questionable tremor. Consistency of goitre did not suggest malignancy. Basal metabolism 33 plus. Moderate degree of pyorrhea. Tonsillar pillars reddened and thickened. Diagnosis, "toxic adenoma, dental infection, chronic tonsillitis." Operation October, 1921. The entire adenoma and entire right lobe was removed. The opposite lobe appeared normal. Recovery uneventful. In four months time the patient was again doing washings, having apparently completely recovered with the exception of her strength which had not been fully regained. She is now having good health.

Case No. 3. Married woman of 49 years, presented herself in 1918 because of some recent enlargement of a small bunch in the lower left pole that had been present for years. She had no toxic signs and the general health was good. The consistency was hard and stiff (not the hardness of calcareous degeneration), suggesting malignancy. Because of this removal was advised and accepted. The entire right lobe and isthmus were removed. The opposite lobe seemed normal. Pathological examination by Dr. Warthin was as follows: "Adenomatous goitre with an area of proliferating adenoma of a type that produces bone metastases. Early adeno carcinoma." The operation was followed by X-ray treatments. There are no signs of recurrence and she has excellent general health.

I wish to emphasize the importance of the feel of early malignancy as differing from the feel of other forms of degeneration. It is difficult to describe and must be learned from painstaking study of a large number of cases.

My plea has been to prevent damaging effects from a type of goitre which displays a danger signal usually for a long time. If the warning has been disregarded, however, good results may still be obtained.

DISCUSSION

DR. C. E. BOYS, Kalamazoo, Mich.: I think that is a very important paper, especially so because of the slowness and insidiousness with which the disease comes on. Most of these patients do not come in complaining of. goitre. They come in gasping for breath. They wonder why they have so much dyspnea, or they come in with headache. They usually have high blood pressure. In contrast to the hyperthyroidism cases they are usually pretty well nourished. Most of the cases I have had have been in large, fat women, so much fat that the goitre was usually obscure to some extent. These cases are important because of the damage done to the heart and other viscera, as suggested, before the patient herself is aware that anything is the matter. I have found in many cases not only heart but also the kidneys showing marked involvement. I have seen from 3 to 18 per cent of albumen in these cases. They are important because when this damage is once done it does not recover even with removal of the gland. I have known of a case successfully operated on in another place which later came to me and this patient was so wrecked that she never recovered and went on to death within a year or a year and a half after the original operation. Knowing these things to be the case, I feel as Mr. Vanden Berg does that we should operate on them before this damage occurs. The only question that comes up is just when are you going to do it. Most of these patients will carry these goitres 10 or 15 years before these symptoms develop. At just what period are you going to say, "You ought to have this goitre out?" I think we could not manifest sufficient criticism if we said that in the beginning of the symptom. I think the blood pressure rising in a patient with any goitre should be sufficient indication for removal of the goitre. It is my impression that the rise in blood pressure precedes the other symptoms as far as the heart is concerned. It has been shown at the Mayo Clinic that while the mortality rate from operating on toxic adenomas is geater than any other, more than 4 per cent, that the curability is also the greater, being about 90 per cent, that is 90 per cent of the cases are cured in contrast to the 80 per cent of cures in hyperthyroidism, but the operation must be done in the stage before these damages described by Dr. Vanden Berg have taken place, in which case the mortality is practically nil. They further, I think, emphasize the importance and justification of removing these before these serious symptoms develop. You might say why not treat these with medicine. It has been shown also at the Mayo Clinic that while they have found in the last year that iodine improved the hyperthyroidism cases, and they give it in 10 to 50 drop doses of the Lugol's solution, quite a contrast to what we believed we could give a year ago—at the same time in toxic adenomas this same drug administration causes the most pronounced aggravation of the disease and should never be used in adenoma.

Now how are you going to say whether it is an adenoma or a toxic adenoma or even differentiate it from hyperthyroidism? In some of these glands you will get myomatous tissue, adenomatous tissue and colloid tissue. I think the clinical picture is the only one we can go on and it is worth more than the pathological picture. I think we should all do our best in these adenomas to get them removed early. Certainly the scar of an operation is nothing compared to the bump on the neck that the adenoma makes, looking at it purely from a cosmetic viewpoint.

DR. F. E. MARSHALL, Muskegon, Mich.: There are two points I would like to call attention to. One is the fact that after we remove adenomas, these patients do not gain flesh very rapidly. You noticed these patients who were here today were not very fleshy. I find that it is true of the adenomas that are removed. Patients from whom adenomas are removed do not take on flesh rapidly as do the cases who have exophthalmic goitre. I believe that it is the duty of the physician to inform his patients in whom he finds adenomas that this is a tumor which is most certain to cause them serious trouble and it should be removed before any of the symptoms of heart trouble develop. I do not think we should wait even until it gives high blood pressure. The increased metabolic rate often does not develop until after the high blood pressure develops.

As to whether or not the use of iodine is aggravating to these cases brings to mind this propaganda that is going on now to compel every one to use some iodine. It seems to me that that is very ill advised. Now these simple colloid goitres are the only ones that are benefitted by the use of iodine. They never killed any one and they never do any particular damage and why should we make so much noise about a remedy that will only affect them individually, when it is the adenomas that do the most damage. I do not know anything in particular about the value of iodine in the hyperthyroidism cases and in the exophthalmic variety, as Dr. Boys has mentioned in the Mayo Clinic. The metabolic rate in adenomas I think is something that is not as safe and reliable a guide to the best time for operation, nor is it any indication as to the seriousness of the case, as it is in the exophthalmic variety of goitre. When we find the basal metabolic rate of 70 or 80 per cent plus or 100 per cent plus in the exophthalmic variety it gives us a definite idea of the condition of the patient and as to the best time to operate. When we find a case that presents a basal metabolic rate of plus 40 in a patient who has had a toxic adenoma for a number of years, that patient is not in as good a condition for operation as the one who has a basal metabolic rate of plus 70 in a case of exophthalmic goitre that has only existed for a short time.

The adenoma is congenital and in treating adenomas surgically as Dr. Vanden Berg has mentioned, they are usually multiple. Sometimes there are very many in one or both lobes. If some of these are allowed to remain after the operation they are likely to develop and cause more trouble and it is my practice, in those cases in which I can palpate many of these smaller tumors in the lobe, to split the lobe longitudinally and shell out all of the adenomas. I do not know of any other way of finding all of the tumors except to split the lobe and search for them as you would search for calculi in the kidney. When we find these adenomas occupying so much of the gland tissue that there is very little of healthy gland tissue remaining, it is very important that we conserve all of the good gland tissue there is. If we take out one mass from the gland tissue, removing the good tissue with the adenoma, we are doing very great damage. I think we should conserve all the good gland tissue in these adenoma cases that we possibly can.

DR. WILLARD BARTLETT, St. Louis, Mo.: It is surely a great pleasure to be permitted to take part in a discussion of a subject in which I have always been very much interested. After reading Dr. Vanden Berg's paper with a great deal of pleasure I am struck by many points which he has emphasized, and one is about the type of heart damage. Now hearts that are damaged by toxic adenomata tend really to be seriously and permanently damaged. We know perfectly well that the heart in exophthalmic goitre tends to come back very nicely to normal even though there has been apparently a good deal of both functional and anatomical damage. That is not true

to the same extent of the heart in the course of the growth of a toxic adenoma. There come to my mind three instances of this which I believe will clinch the thing better than any number of general remarks that I might make. One of them was a lady who was kept around the hospital a number of weeks trying to get her heart in shape. She was seen by a number of the most competent medical men. After having her for a number of weeks we got her around to the point where we got out half of her thyroid. She had a very stormy immediate convalescence but at the end of a week she had quieted down and her heart had steadied to the point where we attempted to get out the other half. Now after the removal of the other half her systolic blood pressure started up, the pulse pressure widened, her heart grew more and more rapid and within 24 hours she had died a rather typical heart death. It was the second traumatic load on top of an already bad heart which finished her. We operated on her because we have learned that we had better get the second half while they are in the hospital because they do not come back.

Profiting by our experience here we had a similar case last spring in a rather elderly lady with a typical adenoma heart damage, in whom, after a lengthy preparation we barely succeeded in getting one side out. She had a stormy convalescence but went home and began to improve. We told her to stay six months. She went along nicely until the six months were up and then came back in seemingly pretty good shape, but for some reason or other, perhaps psychic or nervous, that heart began to go to pieces from the day she reached the hospital and she is there now with every evidence of a very serious decompensation. Of course we immediately put off the operation which should have been done a week before she came in. That case illustrates that we are between the devil and the deep sea, if we take out the second half the week following the removal of the first we get into trouble, if we do not get it in the period before the heart breaks a second time we get into trouble, so in these bad toxic adenomas with heart damage we really have the most serious problem there is in goitre pathology.

I want to briefly mention another patient, an old toxic adenoma case which illustrates certain of the remote potentialities of this very interesting disease. We removed this toxic adenoma last January. Although she possessed a fairly bad heart we got by with the operation all right. She went home. All the symptoms improved nicely, the heart along with the others, not completely but fairly satisfactorily. She came back as instructed in June, five months later, for the removal of a very large fibroid of the uterus which was causing pressure symptoms. That was what she originally came to us for, for although she had a goitre it had never been diagnosed. She was thought to have a fibroid heart which I do not believe exists. When she came back we considered her heart in shape for us to go in and get out the fibroid. She was greatly afraid of a general anesthetic so we gave her a spinal anesthetic and got out the fibroid. She went along for three days and at the end of that time strange symptoms commenced in the lower extremities, parasthesia, terrific pain, numbness, change in sensation, change in reflexes and a number of things that were not clear to us until gangrene set in over a portion of both lower extremities. Having had a little experience in experimental surgery of the aorta we were able to diagnose a thrombosis at the bifurcation of the aorta. The woman died and the autopsy proved what the lesion had been. It was accounted for by the fact that in this old, dilated, sclerotic heart mural thrombi had formed on the left side, particularly in the left ventricle. Under the influence of the second operation a blood clot had been loosened and caught at the bifurcation of the aorta, blocked both internal iliacs with the classical consequences.

These cases show some of the dangerous potentialities of adenomas of the thyroid.

At the risk of taking a little time I am going to tell you how we have tried to avoid that. We put these patients to bed. Upon the appearance of ventricular extrasystoles we very thoroughly digitalize every one before operation. We give them at least three doses, administering the digitalis internally if it does not nauseate them or hypodermatically if it does, thus getting a jump on the post-operative complications and giving them the post-operative treatment before the operation, before the cardiac complications come.

DR. M. E. SMITH, Muskegon, Mich.: This is a type of surgery that demands, I think, as much judgment as any other type of this disease. It is highly important, as Dr. Vanden Berg has brought out, to operate on these if we can get them before they have had degenerative changes, not only of the heart but of many other vital organs. It is a matter of good deal of judgment to know just how much to take out in these cases, for they have to be handled carefully and with judgment. If you have gotten them before there is a great deal of damage, our experience is that 80 to 90 per cent of them get perfectly well. I think it is important with these as well as with other goitre cases to emphasize to them just because you have removed the goitre they are not well people. They need a good deal of careful, conscientious after-care to bring them back to their best possible health. It is so with other goitres and also with exophthalmic. I was pleased to hear Dr. Boys state yesterday in speaking about the removal of exophthalmic goitres in from 75 to 90 per cent of the cases. A great many speak of the toxic type and the hyperplastic type. In the cases we operated on formerly we thought we did not remove enough of the gland. Quite a number of those had recurrence. I believe that was because they did not have enough removed. If you leave in a part of the gland to which there was a good supply, it is important to leave it connected with one of the four main blood vessels so you get a good blood supply. If you do leave part of the gland connected with the vessels it will compensate up to the needs of the body and you do not get a hypothyroidism. The type of toxic goitre as he said should be operated on early.

There is one point in operating which we have found of help. Some years ago a good many of the patients complained of severe pain in the back of the neck after the operation, at least for a little while. We have overcome that by having two air pillows, one under the shoulders and one under the head, blown up to two-thirds capacity before operation, then letting out the air under the head just enought to throw back the chin to get the best exposure. Since using that we have not been getting the pain in the back of the neck that we used to get when we put in something hard.

I greatly enjoyed the paper and I think we should realize that we should not let these toxic goitres go until they have done damage, not only to the heart, but to other parts of the body as well. Dr. Marshall brought in a timely warning that I think we should keep in mind, that is the promiscuous use of iodine. We know there are certain places in which they have an excess of goitre. If iodine is given to these children they are going to be damaged greatly by it. He has brought out that it is only of help in simple goitres.

DR. HENRY J. VANDEN BERG, Grand Rapids, Mich., (closing the discussion): Everybody seems

to think it wise to operate upon adenomas before they become toxic. Now why do we let them go until they become toxic as we have been doing? Like other things in medicine (foci of infection), we need proaganda and we need it emphasized. We are now removing foci of infection before damage occurs. The damage from ordinary foci of infection may be great, but in toxic adenomas we have something that goes to the vital organs, not only to the heart, but to all the parenchymatous organs. Dr. Marshall mentioned something about the high and low values of the metabolic rate as a guide to operation. A patient can have a low metabolic rate and not be a good subject for operation, whereas he may have a high rate and be a good risk. It depends upon the condition of the vital organs. Now as to the treatment of different types of goitre. The exophthalmic type seems to yield best to surgery. I do not think we need to fear removing too much in the adenomatous type, as the adenomas are usually located in the lower pole. There is enough in the upper pole to carry on the thyroid function. Regarding the medical treatment of exophthalmic goitre it may be that this type can be treated quite successfully medically as is done in the Mayo Clinic, where iodine is administered with good results. It is possible that some modification or even something else in a medical way may be brought out. X-ray treatments are given with some success and some men are quite enthusiastic over it. The adenomatous type does not yield satisfactorily to X-ray. Dr. Bartless spoke about digitalizing patients. I think it is a very important consideration in preparing patients for operation. Dr. Boys said something about being governed by the blood pressure as to when to operate. If that were a safe index it might be all right, but I do not know of any one thing that is going to tell us when we should operate. I have said that unless contra-indicated, all adenomas in patients above 25 or 30 years of age should be operated. You might ask when is it contra-indicated? A case in point is one who had diabetes, badly infected teeth and tonsils a denfiite cholecystitis and a prolapsed uterus, besides the adenoma. Now how are we going to manage such a case? The diabetes had to be taken care of first, the mouth had to be cleaned up, the gall bladder was removed, the prolapsed uterus corrected. Since the patient had so many operations, and the adenoma was not definitely toxic, it would seem well to postpone further operation in a case of this kind unless it were absolutely necessary.

THE PROGNOSIS IN STREPTOCOCCUS VIRIDANS BACTERAEMIA

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Our present conception of subacute bacterial endocarditis is that it is a disease with practically a uniformly fatal outcome, there being until recently, at least, only one freely admitted report of recovery in the literature (1), (2). Although this diagnosis can often be conjectured without the supportive evidence of a positive blood culture, still there is no doubt that the one laboratory finding which corroborates the diagnosis in the majority of cases is the isolation from the circulating blood of the short chain anhaemolytic, green producing streptococcus. And so it has happened that such a finding has come to be generally regarded by clinicians as one of the utmost gravity. Added seriousness of prognosis is due to the fact that bacteraemia may be discovered before the physical signs of valvular deformity manifest themselves, and before systemic emboli appear in the disease picture.

Various observers have reported recoveries, the majority of these not being freely admitted as instances of subacute bacterial endocarditis owing to the lack of valvular lesions and embolic phenomena. Libman (6) mentions three patients with subacute bacterial endocarditis that he had observed to recover completely from the disease, but he has not published the details. Murray (7) mentions 1 per cent of recoveries in 200 cases, but has not reported them in detail. Hemsted (1) observed one patient over a period of a year and a half, who recovered from a clear-cut subacute bacterial endocarditis. In this case there were numerous emboli and definite valvular lesions. Jochman (8) claims two recoveries from the disease, Lorey (9) one, and Abrahms (10) one. Jochman's patients were lost sight of very soon after discharge from the hospital; Lorey's case was observed for only seven months, and Abrahm's for only four months. Also in Abrahm's patient there was neither definite evidence of valvular deformity nor were any embolic phenomena demonstrated. Other authors (11), (12) report cases of the disease in whom there was a disappearance of bacteraemia and of fever, but a fatal outcome in a few months from cardiac insufficiency.

The forms of treatment used in the patients who were said to have recovered from these infections or to have made improvement were extremely varied, the methods advocated by the various authors being autoserotherapy, streptococcus viridans vaccine, autogenous vaccine, arsphenamine, intravenous injection of various bactericidal substances, removal of focal infection, while in the majority of cases only palliative measures were used. No form of therapy that succeeded in one case has seemed to be successful in another.

Joseph Capps (14) of Chicago has recently reported four cases, all showing typical manifestations of the disease, who are still alive after periods varying from two years to eleven years and six months.

He is the only author who appears to have had any continued success in the treatment of bacterial endocarditis. His cases were all given Sodium Cacodylate in doses of one to four grains over periods from one to four months.

In the group of anhaemolytic streptococ-

cus bacteraemias where a definite diagnosis of endocarditis cannot be made, the prognosis is better. Warren and Herrick (3) reported recovery in ten cases; and Owen, Graham and Detweiler reported twenty-three more rather mild cases that had been under observation at that time for no longer a period than six months. In Warren and Herrick's cases the growth did not occur in solid media, while in Oille, Graham and Detweiler's (4) series it was in each case obtained by the supposedly more sensitive method of varying oxygen gradients advocated by Rosenow. (5). In none of the recovered cases cited by either author did any emboli occur, or were petechiae found.

Webster reports three recoveries from streptococcus viridans bacteraemia: One patient was observed four months; another a few weeks; and the third over a period of three years. The last mentioned patient had neither definite evidence of valvular deformity nor embolic phenomena. One of the others did show petechiae.

CASE REPORTS

During the period of approximately nine years we have collected 20 cases in which the anhaemolytic streptococcus was found in the blood stream. Eighteen of these were typical instances of subacute bacterial endocarditis, showing enough of the typical clinical features, including systemic emboli and valvular lesions to dispel any doubt as to the diagnosis; likewise, they have all suffered the usual fatal outcome, save four, and they have only had the disease a few months.

The remaining two cases aroused a keen interest.

Case No. 1—8513 D. G., boy age 11, admitted to the Outpatient Department, January 28, 1921, complaining of weakness.

Present Illness—Four years previous to admission a peritonsillar abscess was incised. This was followed for several months by a low grade arthritis involving various joints. Tonsillectomy six months before admission. Ever since then languid and tired, with daily slight elevations of temperature.

Examination—Weight 65½ pounds. Height 4 feet, 7½ inches. Temperature 99.6 degrees; pulse 118; respiration 20. Slight pallor. A small amount of tonsil tissue remaining on either side. Palpable glands beneath the angles of the mandible. Cardiac dullness slightly wider than normal but no murmurs heard. Spleen not palpable. No petechiae. The urine showed three plus albumin but no casts. R. B. C. 4,256,000; W. B. C. 9,200; H. B. (Sahli) 82%. Blood culture January 22, 1921—streptococcus viridans.

The patient being considered unsuitable for out patient care was returned home and was attended by his family physician. Further information for a short space of time was obtained from the mother. X-ray therapy to the tonsils and Ultra Violet Ray exposure to the chest were administered. There was gradual improvement during the spring and summer, patient became afebrile and gained weight up to 76 pounds. The blood culture done at another laboratory was reported to the mother as negative.

The boy has been observed several times since by the writer, the last observation on December 13, 1922. His weight was then 85 pounds and he seemed well in every way. There is no evidence of any valvular lesion. In a telephone conversation with the mother on December 15, 1923, she reported his continued good health. Duration of observation two years and 10 months.

Case No. 2.—376 E. L., widow, age 44; occupation, domestic. Admitted to the hospital May 22, 1916 complaining of weakness and fever.

Personal History—Frequent sore throat and quinsy once previous to eight years ago.

Present Illness—Eight days previous to admission, chill, anorexia, fever. Three chills since onset, weakness.

Examination—Palpable spleen, soft edge. Tonsils innocent in appearance. Teeth all extracted. Sinuses clear. Cardiac findings normal throughout entire illness.

Blood culture, June 2, 1916, positive for streptococcus viridans.

Blood culture, June 8, 1916, positive for streptococcus viridans.

White blood cells 8,000.

The temperature on admission ranged between 98 degrees and 102.6 degrees; was of remittent type and gradually fell to normal in three weeks where it remained, coincidentally with the patient's complete recovery.

Subsequent blood cultures on the following dates were all negative: October 12, 1916; September 2, 1920; December 17, 1921.

Her spleen has continued to be palpable, but she has remained well, aside from a few minor ailments. In October, 1921, she had a mild arthritis. Tonsils were regarded as a source of infection and were removed, December 15, 1921.

Again on January 21, 1922 she had the following operative procedures and came through very well; appendectomy, right femoral herniotomy, uterine suspension. During the last few months there has been a slight recurrence in her arthritis; this yielded for a time to non-specific protein therapy but has recently recurred. At no time has any evidence of valvular deformity been noted, or any petechiae observed.

Duration of observation seven years and four months.

In both of these cases the bacterial growth occurred on blood agar plates.

The interpretation of such cases is indeed difficult, in fact, they probably do not admit of more than theoretical interpretation. Both would possibly be regarded by some as instances of a mild form of endocarditis with recovery, or a progression to the "bacteria free" stage. Others would likely maintain that they represent overflow bacteraemias from a nidus of infection elsewhere than in the blood stream, refusing to class them as endocarditis cases because of the absence of valvular deformities and of embolic phenomena.

Case No. 2 more nearly simulates the picture of subacute endocarditis than case No. 1, the special features suggesting this being: the onset with chills and sweats and

the splenomegaly—the latter persisting.

Petechiae or systemic emboli did not occur in either case.

The form of treatment used, other than the elimination of potential infective foci must be regarded as palliative and in neither case as having any definite effect on the course of the infection.

Considering these two patients together with a review of the literature bearing on the subject, the following conclusions seem justified:

Extreme caution should be used in making the diagnosis of subacute bacterial endocarditis on the sole basis of a positive blood culture—especially since the diagnosis carries with it the corollary of at most no better than a 1 per cent opportunity for recovery.

It is still useful to divide the cases of streptococcus viridans bacteraemia into two classes:

First, the class showing all the four cardinal signs of subacute bacterial endocarditis as mentioned by Horder, namely:

1. Fever.
2. Manifest valvular lesions.
3. Embolic phenomena.
4. The isolation of the micro-organism.

Second, the group of cases in which neither embolic nor definite valvular lesions appear in the disease picture. In this group there seems to be a very large opportunity for recovery and it would be better that such cases not be diagnosed as subacute bacterial endocarditis.

At least three out of the four above mentioned cardinal signs should be present before this diagnosis is made.

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FOUR MONTHS THROUGH EUROPE WITH A PHYSIO-THERAPEUTIST

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At the conclusion of a recent trip to Europe, during which we visited a large majority of the leading clinics and hospitals, there is one fact that stands out preeminently in our recollections: Europe thoroughly recognizes the tremendous value of physiotherapy as a specialty and an adjunct to the practice of medicine and surgery. Unlike America, where physio-therapy, officially considered, is all but a minus quantity, every important medical center of Europe, and they are all of greater or less importance, is more or less thoroughly equipped for physiotherapy; absence of complete equipment being due in each particular case to lack of finances, and not to lack of appreciative desire.

To forestall possible misunderstanding, we do not forget that the government hospitals in America, have been and are, employing considerable physio-therapy in the reconstruction of disabled soldiers, but with that one exception, it is the regrettable exception and not the rule, to find our hospitals even slightly equipped for the administration of physio-therapy. Middle Europe is still suffering from the effects of the war; to be more accurate, she is progressively suffering, as conditions, notably in Germany, are decidedly worse than they were immediately upon the conclusion of the war. Economic distress will obviously impress itself most strongly upon the professions, and upon that of medicine not least of all.

One incident will serve to illuminate: In Heidelberg we spent a day with Prof. —, chief of one of the most important departments of the University. Upon first meeting the professor, one would easily mistake him for the janitor, and not a first class janitor at that; his linen was frayed and threadbare; his clothes and shoes patched; and his emaciated frame and sallow complexion told the story of deprivation so universal all over Germany. This thoroughly educated and talented physician was thankful to live rent free, in three tiny rooms of one of the outbuildings of the University, which at least provided shelter, if not heat, for his wife and three children. For his services,

highly scientific and entailing exhausting hours daily, he received the equivalent of $1.00, paid every two weeks. Naturally, a University, only able to pay such starvation wages, for it could scarcely be termed a salary, would not be expected to be able to keep its hospital equipment even half way up to standard. Yet even here, we found a working battery of quartz mercury and other therapeutic lamps being used in one of the clinics.

In Frankfurt a/ Main, the city hospital of 4,000 beds, has each clinic complete in itself, which means each separate clinic, surgical, medical, gynecological, skin, nervous diseases, etc., has its own treatment and operating rooms, with its own X-ray, electro-therapy and other departments, entirely complete and separate from each and every other unit.

In the small town of Nuremberg, the Stadt Krankenhaus comprises 32 units, one of which consists of a most thoroughly equipped physio-therapy department: electric light, sand, steam and needle baths; galvanism, faradism and diathermy; a battery of air-cooled and water-cooled quartz mercury lamps, heat and solar lamps; and a whole floor of apparatus for physical exercise of any and every part of the body.

The University Hospital in Munich was suffering severely from lack of finances and the day we were there, their last available water-oooled quartz mercury lamp lay down and expired, owing to carelessness in not controlling the water supply, which is an argument in favor of lamps not entirely dependent upon an uninterrupted flow of water.

In Berlin, at the Charite, we met Prof. Franz, chief of the women's clinic. Here we saw cases of gonorrhoeal infection being treated, though not very successfully, with a high powered electric sunlight, and others, more successfully, with an air-cooled quartz mercury lamp, provided with a focusing localizer for vaginal and other orificial treatment. A dozen cases of adhesions and of other pelvic pathology, were undergoing treatment with electric light apparatus applied directly over the abdomen. These heat applications took the place of diathermy, which latter form of treatment was not being used in this particular clinic.

The electro-therapy department proper, presided over by Prof. H. Adam, was thoroughly equipped and up to date, with all varieties of electrical and light apparatus, and installations for giving electrical, mud, and medicated baths.

At the clinic of Prof. H. Wintz in Erlangen, we saw the X-ray at its highest development. Here, as elsewhere in Europe, we saw machinery complicated enough to require an electrical engineer to unravel its mysteries intelligently, but out of all the almost endless array has been evolved a triumph of precision in technique. With an absolutely non-fluctuating current, and a constant time and distance exposure, penetration and effect could be mathematically computed to a working fraction. We saw plates which were marvels of clearness; the uterus and adnexa, both physiologic and pathologic, were revealed as clearly as contiguous osseous tissues; pus tubes, cysts of the broad ligament, gravid uteri of two months, and other soft structures, usually considered translucent to X-ray, were revealed with startling distinctness.

In Austria and Hungary, poverty abounds, but it is not the heartrendingly wholesale, obtrusive and hopeless poverty of Germany. A fairly stabilized currency is enabling these two countries to regain a foothold. The University of Vienna has 10,000 students enrolled; a larger number even than in prewar times.

We spent a day with Professors Finger and Kyrle, observing the skin and venereal department of the Allgemeines Krankenhaus and saw cases which could only exist in a war-racked land, where food and vital necessities have been and still are difficult to obtain in satisfying quantities. For syphilis, they have been giving a preliminary number of salvarsan injections, followed with a certain number of malarial fever inoculations; the subsequently developing attacks of malaria being treated with intravenous injections of quinine and finally, a concluding series of salvarsan injections are administered. In this manner, we were informed, they have been able to obtain and retain positive Wassermans, in cases which had previously been treated by classical methods, for months and years to no permanent avail. In their venereal clinic they average 3,000 spinal punctures a year.

We spent an evening with Prof. Robert Otto Stein at his private office, which we found thoroughly equipped with X-ray, a quartz mercury air-cooled lamp, sunlight lamp, diathermy, galvanic and faradic apparatus.

For diathermy, one almost invariably found metal electrodes used, glass being conspicuous by its absence.

The University hospital in Budapest contains a good laboratory, a well-stocked library, a first-class X-ray and photographic department, some electro-therapy, and a de-

partment for modeling in wax; the models of many rare and interesting pathological cases being absolutely true to copy.

At the Finsen Institute in Copenhagen, we found them still preferably employing the same type of lamp that Finsen himself introduced and which is so universally known by his name. They treat a tremendous amount of lupus, for which they use compression upon a small area at a time, the water-cooled lens being held for about two hours in accurate, close contact by a nurse, which means much expenditure of time, labor and expense. But they claim to cure 80 per cent of their cases, which, after being discharged as cured, are required to report every three months to a year for an indefinite period of years, in order to keep control of possible recurrence.

In Copenhagen, we also visited the Bisperjaerg Hospital, which, as its name implies, is situated upon the summit of a hill and found it fully entitled to its reputation of being the finest hospital in Europe. The hospital, which contains 800 beds, was built in 1913 and embodied every scientific, practical and luxurious idea known to the hospital world at that time. Its units are spread over a considerable space of grounds, which grounds equal in taste, luxuriousness and beauty, the surroundings of some regal domain. The wards and corridors, which are extremely commodious, are everywhere decorated with shrubs and flowering plants. Everything about the hospital and its surroundings is contrived to accentuate comfort and beauty, combined with the highest type of scientific service.

In addition to all the usual necessities considered requisite for a first class hospital, it is equipped with solaria; all varieties of mud, medicated and other therapeutic baths; mechano-therapy apparati; electro-therapy; light therapy.

We did not visit any clinics in Danzig, but we did see something in medical advertising that no one will ever see in America: this was a film reproducion of Dr. Steinach's operation a la monkey glands, given in six acts; each act showing some phase or development of plant and animal sexual life, continuing on to a full depiction of the operation in all its surgical details. The first operated case shown was that of "Old Methuselah," a decrepit rat, who is later shown rejuvenated and with a harem of admiring wives; and in the last scene we see an old valetudinarian operated upon, who, post operatively and proudly twirls his mustache and exhibits his lusty rejuvenescence.

Nothing is left to the imagination but to make certainty more certain, the pictures are profusely prologued and epilogued with literal explanations printed in the German language. For the equivalent of 25 cents anyone could gain admission to the theatre, where both sexes were seated indiscriminately together.

Warsaw has a fine University and commodious hospital buildings but poverty reigns supreme.

In the obstetrical clinic, no cases had been received for two days, owing to lack of clean linen.

In London, we visited Prof. Cumberbatch, chief of the electro-therapy department, and Dr. McGregor, his assistant. Dr. Cumberbatch is doing considerable work with diathermy and has published an authoritatively practical manual upon that subject. At this clinic they are employing tungsten arc lamps in preference to all others, quartz mercury included, as they find in their experience, that such arc lamps give a fuller active ray, the therapeutic results being correspondingly better.

This was one of the few clinics where we found them employing the sinusoidal current, as Europe, with few exceptions, is not using this variety of current, which we in America have found so invaluable. For some unfathomable reason, the sinusoidal current is considered as quite too dangerous for use, but just wherein the danger is supposed to lie, we were unable to ascertain. We are naturally inclined to believe, that untoward results could only arise from imperfectly constructed apparatus.

Another thing conspicuous by its absence everywhere in Europe, was the familiar, to us, high frequency machine combining d'Arsonval, Tesla, and Oudin currents within the one apparatus. We were informed, that believing the therapeusis of high-frequency currents to be dependent solely upon their thermal activity, a diathermy apparatus should serve every therapeutic purpose for which high frequency currents could be possibly indicated.

Leysin, Switzerland, we found intensely interesting and unique. Here in 1903, at an altitude of 5,000 feet up in the Alps, Dr. Rollier started his first tubercular clinic, which has now grown to 32 extensive establishments under his personal control. Leysin is so situated that the sun, refracted at a certain angle from the Alps, especially in the winter, when they are covered with snow and ice, creates an atmosphere which is intensely warm and also extremely rich in chemical rays. With the sun shining, one

can easily mistake Leysin for a summer resort, but when night arives, there is no illusion as to the necessity for protection against the intense cold. Here, from all parts of Europe and elsewhere, come cases of tuberculosis, so-called but misnamed surgical tuberculosis; however, every known form of tubercular pathology is to be seen. Here we saw cases of years duration, with bones and joints eroded; sinuses, multiple and tortuous; every conceivable deformity of spine and limbs; cases that have been operated and re-operated upon and now, in addition to their original tubercular infection, have had superimposed a mixed infection. These cases, given up as incurable by the best surgeons of the world, are in time: one year, three years, maybe longer, but in time a large majority of them are entirely healed of their infection; the long discharging sinuses dry up and, miraculous to see, but here seeing is believing, the limbs are restored to more or less normal motion and crooked limbs and spines regain almost natural contours.

All patients are gradually habituated to remain for hours each day with the entire body exposed, their cots being wheeled out upon open balconies, so situated as to most fully obtain the benefits of these refracted healing rays. These rays, in conjunction with the peculiarly tonic properties of the mountain air at this particular elevation and situation, also in conjunction with Dr. Rollier's practically scientific but non-surgical methods, achieve these wondrous results.

In this sketch, it is impossible to give details; one simply states these few facts, thereby hoping to stimulate possible enthusiasm in others to study his work and methods.

We finished our medical wanderings at Paris. Here at the Salpetriere, France's oldest hospital, with 8,000 beds, we found everything working in first-class order. We visited the famous Charcot clinic for nervous diseases, and finally landed in the electro-therapy department, presided over by Prof. Bourguygnon, conceded to be the most distinguished electro-therapeutist in France. We found the Professor exceedingly cordial and spent a day with him at the clinic and his private office. The Doctor has just perfected a rather complicated and extensive apparatus, by means of which he is able to control the voltage and amperage of the direct current to any desired strength and combination, and is thereby revising much of the heretofor recognized methods of diagnosing and treating muscular and nerve affections. He has also accomplished wonderful results in some cases of central paralysis and in the removal of extensive scar tissue by his own particular technique of ionization.

The physio-therapeutist needs no argument as to the incalculable value of his specialty as an adjunct to medicine and surgery, but a visit to the clinics abroad, serves to accentuate his beliefs and enthuse him the more to preach and spread the gospel of his specialty as a bridge whereon to convey suffering humanity to some measurable degree of well being.

PUBLIC HEALTH*

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It is only about 25 years ago that I became somewhat acquainted with some of the work of the Michigan Department of Health. It is interesting to notice some of the progress which has been made. The lack of co-operation in former years was, in my opinion, not caused by lack of interest, but by lack of understanding. It is not surprising that a little friction occurred. This is frequently the case when something new is introduced. The famous saying of Boerne, if I am correct, can surely not apply to the medical profession. Boerne remarked that a famous mathematician, in ancient times, after he had discovered a mathematical truth, sacrificed 300 oxen to the gods, and, that since that time, whenever another truth is discovered, all the oxen tremble.

Some of you may remember the meeting in the old Fellowcraft hall, in Detroit, under the auspices of the Wayne County Medical Society, when the tuberculosis question was still in its infancy in Michigan. It was quite significant with what timidity Dr. Baker anticipated the meeting. Dr. George Kirker, the then president of the Wayne County Medical Society told him in the presence of a very few of us at the preceding dinner, that he, Dr. Baker, could feel assured of fair play. I was interested in the meeting because it was on my motion that the meeting was called and that Dr. Baker of the State Health Board and some other speakers, of whom Dr. Novy was one, were invited to participate. Be it said to the credit of all concerned that the dissensions have been comparatively easy of adjustment.

March 4, 1904 I addressed, upon the request of Mrs. Gretter, the Detroit Graduate Nurses Association (see the National Hospital Record April, 1904) in the interest of the State Registration of Nurses. It is now a well recognized

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necessity. It is too early to be in a reminiscent mood. We are to-day still in the early days of the activities of the State Board of Health.

It is a great pleasure to be here today and to acknowledge the work which the State Board of Health has done and is doing. The medical profession and the State Board of Health are co-operating, and are in competition only for the welfare of the people, respecting the right of the citizen and the right of the individual physician. Yet, while we bear witness to the good work of the State Board we all agree that only the foundation has ben laid for more work. Let me mention a few things at random. The average person understands very well that he will die if he takes a given quantity of poison at a given time, but he does not always recognize the poison that does not kill instantaneously and spectacularily. It is the duty of the Board of Health to point out these poisons, to warn people and to protect them. That is what the people of the state can demand. The millenium has not come yet. We all know what kind of air we are obliged to breathe in the cities. It is a disgrace. Pure air, pure water and pure food are the most primitive demands of civilization.

It is also within the realm of contemplation to consider whether the Board of Health, perhaps in co-operation with the State Medical Board, has not the duty to protect the people in a more strictly professional way. There are the many pseudomedical concerns which should receive attention, and many pseudo-semiprofessional individuals. The activities of the Board might even go further. Imagine, that today anybody can call himself a specialist who choses to do so. That is nothing but anarchy and a disease dangerous to the public health. An inferior professional man is worse than smallpox. Against smallpox we are protected, against incompetent men we are not. Some authority, state or otherwise, should step in. It is a glaring shortcoming of the state machinery. The relations between hospitals and the medical profession in general are too loose.

The hygienic conditions in schools should receive much greater attention by hygienists, or, by specially qualified physicians. Each school should have a physician's office, not only to pick out sick children but to be responsible for the whole school from a hygienic standpoint. This also includes the curriculum. It is almost unbelievable, but it happens that gymnasium exercises are done early in the morning before the other school work starts. This is only one of the many things which should come under the direct or indirect supervision and care of a responsible State Board of Health. Let us hope for progress. The time may come, when, besides a library and, besides an art institute, every city or every district will have a museum of hygiene. After all, good health is one of the most important, if not the most important factor, which is necessary for good citizenship and for the happiness of the individual. The family looks for advice and guidance to the modern family physician and his consultants. The community at large places its trust in the Board of Health. All these should co-operate for a better future.

ACUTE INFECTIVE POLYNEURITIS IN CHILDREN WITH REPORT OF CASES*

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It is my purpose to call attention to a group of cases met with in children which occasionally offers a very interesting problem from the standpoint of differential diagnosis, namely, acute infective polyneuritis.

Acute infective polyneuritis has been described by Osler (1) and Holmes (2) each having recorded the clinical and pathological findings in a number of cases of adults. During the late war a number of such cases have been reported by Kennedy (3), Bradford (4), and others. The latter has given a very complete clinical picture of the disease as well as a complete study of the pathology, isolation, and culture of the virus of the disease and transmission from man to monkey.

The clinical picture of the malady may be briefly summarized as follows:

Onset—Palsy may be the first complaint, but the more usual onset is preceded by an initial illness. During the initial stage the symptoms may vary from moderate fever, headache, pain in back and limbs, in all degrees to a severe picture that may even simulate acute meningitis to such a degree that lumbar puncture is necessary to rule it out. All symptoms usually subside within a few days so that little attention may be paid to the case and patient is discharged as apparently well. The patient may continue in this period of latency from a few days to six weeks. In some cases, however, the onset may be so sudden that the first manifestation of the disease is the palsy.

Paralytic Stage—The patient may suddenly lose power in the legs, but there is usually not a complete paraplegia. This may disappear and reutrn within the next 24 hours. Numb- or accompany the onset of the palsy. Per-

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ness and tingling in the toes may precede sistent headache with fever of 101 degrees to 102 degrees and moderate leucocytosis is usually present in an irregular degree. The motor weakness is at first limited to the legs as a whole, the proximal segments being mostly involved. The patient may not be able to move the arms or legs, yet he can move the fingers and toes in a normal manner.

The flaccid palsy is never limited to any one group of muscles, but one group may be more severely affected than the other. However, it is roughly symmetrical in distribution. The muscles of the back, abdomen and trunk may become so involved that the patient becomes helpless. The intercostals and diaphragm may be affected so that respiration becomes seriously involved resulting in complicating pulmonary conditions. Facial paralysis, usually bilateral, is a common and characteristic finding, but not to such marked degree as in Bell's Palsy or hemiplegia.

Other paralysis as oculomotor, laryngeal, tongue and palatal are rare, although difficulty in swallowing and nasal voice are frequent findings.

The palsy is practically always progressive in character and is usually ascending in type. There is no muscular wasting, contractures or persistent disability after recovery is reached.

Sensory—In this malady sensory phenomenon are also in prominence. Besides the numbness, tingling and pain as above mentioned there may be anesthesia and analgesia. This is most often observed in the distal portions of the phalanges. The sensory loss may be of the stocking or glove type or correspond to the distribution of any particular nerve. As a rule there are no sensory changes on the trunk. Observers have not found much change in the temperature sense.

The Reflexes are usually lost at the height of the disease, but may be brisk in the initial stage. The superficial reflexes are lost on the sole of the foot, but the abdominal and cremasteric are usually retained. The pupillary and palatal reflexes are normal.

The Cerebral Functions are not affected as the patient is always easily aroused and co-operates in a normal manner. Consciousness is always maintained, although some patients are inclined to be rather drowsy.

Miscellaneous Features—There may be some degree of tachycardia present. Laboratory findings, including cerebro spinal fluid, are essentially negative. Cultures of the throat have never shown Klebs-Loeffler bacilli.

CASE REPORTS

During the past two years I have had the opportunity of seeing three cases at the St. Louis Children's Hospital which fit well into the picture of this disease. Through the courtesy of Dr. W. McKim Marriott I will briefly summarize these cases to illustrate the disease.

E. L., aged five years, entered the hospital with the chief complaint of weakness in the legs and infection of the scalp.

Family history and past history was essentially negative. Child had no contagious diseases.

Onset of the present illness was preceded by an initial illness of slight fever, and mild sore throat cultures of which were said to be negative for Klebs-Loeffler bacilli. Child was allowed to play for a few days when weakness in both legs was noticed. He was put to bed. The mother noticed a progressive weakness and loss of use of the legs. A mild furunculosis of the scalp developed later.

On physical examination the child was seen to be well nourished and did not look very sick. Skin was negative except for the furunculosis of the scalp. General physical examination of the heart and lungs was negative. Throat was negative except that the child had nasal voice. Temperature was 101 degrees. Positive Neurological findings were, weakness of both lges so that the child was unable to move them; loss of knee and achilles jerks, no response to plantar irritation. The child was able to move his toes but could not raise his knees off the bed. There was no atrophy.

Post diphtheritic paralysis and poliomyelitis was thought of and the usual laboratory procedures were done such as lumbar puncture, throat cultures, Shick tests, etc., all of which were negative. Blood, both chemically and serologically, showed no abnormality. Urine was negative and W. B. C. was around 13,000.

The child continued in this stage for a few days, but the paralysis gradually ascended to the abdominal muscles and there was questionable involvement of diaphragm. The patient co-operated very well excepting that he could not take liquids at all, they were regurgitated through the nose. The face became expressionless and a slight bilateral facial paralysis was observed.

Respiration began to be markedly impaired. Weakness of the abdominal muscles was found. An abdominal binder was applied for support which aided the respiration. However, respiration became so difficult that the child was put on the artificial respiratory apparatus of Erlanger and Gesell for a few hours.

Paralysis then began to gradually disappear much inthe same manner that it developed. It soon cleared up until the legs were the only parts of the body involved. After a period of four or five weeks this disappeared. At time of discharge the normal reflexes had returned and no residual symptoms were present. When last seen the child was normal in every respect.

Case No. 2. R. R., aged two years and 10 months, male.

Chief complaint—weakness.

Past History—Pneumonia at six months and at one year.

Present Illness—at age of two and one-half had two attacks of "grippe" and sore throat. Following this the legs became gradually weak. Began to stumble and fall and finally could not stand up. Later the arms became weak so he could not push himself into a sitting posture. No history of mental change. Eneuresis a few days before admission.

Physical Examination—Pale, did not look sick. 98.5, pulse 100. Cannot sit or stand, movement of arms ataxic, moves legs very little. General physical examination essentially negative aside from a slightly enlarged liver. Neurological examination by Dr. S. I. Schwab showed loss of voluntary power in all extremities, flaccid paresis in legs, lessened power in all voluntary movements of arms, loss of all superficial reflexes except cremasteric. The symmetry of distribution was fair. No Klonus, Babinski or Koernig's. Sensory changes showed anesthesia below knees. Eye grounds negative.

Laboratory Findings—urine, trace of albumin. W. B. C. 8,500. V. P. negative. Blood and spinal fluid Wassermann negative. Spinal fluid sugar .074%. Cells 12. Child discharged under protest of mother but was given a favorable prognosis.

Case No. 3. I. H., aged 11 years, female. Admitted October 1, 1922.

Chief Complaint—Soreness of shoulders, unable to walk.

Family History—negative.

Past History—negative.

Present Illness—Well until three weeks before admission when the parents noted that patient's appetite was poor. She complained of occasional frontal headache. One month previous slipped and fell, that night marked soreness developed in knees and lower legs. Next morning she tried to walk but fell on account of knees giving away. She was put to bed. Soreness in knees continued. She vomited frequently. Weakness in both arms was noted for some time. Ten days after admission she showed slight movement in left leg and right arm, but practically none in left arm and right leg. Can raise legs by gripping knees with hands while arm is straight and patient is straining backward. Extension gives considerable pain. Sleeps well the first part of the night. Awakens about midnight complaining of severe pain in shoulders and hips. No history of poor vision, no difficutly in swallowing or talking. Has not been in touch with lead or arsenic. No history of infection. General condition appears good with exception of muscular weakness. No tremors. Reflexes: knee jerks very sluggish, upper tendon reflexes sluggish, but presenting no pathological reflexes. Gag reflex is active. Eye movements normal. No facial paralysis. Corneal reflex present. Eye grounds normal. The striking feature was a wide-spread muscular weakness, not affecting any particuar group but involving all leg muscles and arm muscles, especially the proximal arm muscles; in spite of this the reflexes are present. No abnormal responses were elicited. There is no sensory disturbance.

Examination by Dr. S. I. Schwab showed nasal voice slight inequality involution of soft palate. Muscular weakness most pronounced in muscles of legs and particularly so in distal muscles. Extensors of toes and ankles are mostly involved, walking impossible. No sensory findings. Patient is emotional and apprehensive, though not more so than might be normal with the symptoms that are present. Knee jerks are present though much diminished. Achilles are both absent.

Laboratory findings—urine negative. Blood hemoglobin 85, R. B. C. 4,000,000, W. B. C. 6,000, Polys. 70, lymph. 30. Von Pirquet negative. Wassermann blood and spinal fluid negative. Spinal fluid cell count 11, no increased pressure, globulin+.

Course of the Disease—As is brought out above, the general course of the disease is characterized by a danger period from the firfist to the eleventh day during which death may occur suddenly depending on the degree of respiratory paralysis present. Thus the complications are the factors that govern the prognosis. Among adults the mortality is said to be high, but in children, among our limited number of cases, it is found to be low. As to the disappearance of the paralysis, it disappears in from one to six months, and is always complete. Hence, once the diagnosis is made and recovery has started the pediatrician can give the parents a good prognosis.

Thus from the description above noted one can quickly see the close resemblance of this disease to such conditions as, all forms of neuritis, including diphtheritic paralysis; acute poliomyelitis; acute encephalitis; malingering; Landry's Paralysis, and those cases which show tachycardia and paralysis known as Effort Syndrome. However, acute infective polyneuritis differs in many respects from these when each is carefully considered. The disease is no doubt a distinct clinical entity as is proved by the painstaking researches on the isolation and transmission of the virus by Bashford and Wilson, who gave us this clear picture.

Although this disease is not a common one and is of a sporadic rather than epidemic type, it behooves the physician to be on his guard and not confuse it with the more common neurological conditions met with in children.

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DYSTOCIA DUE TO FETAL CAUSES

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This symposium recognizes the fact that dystocia may be due to several causes. In dividing these causes into four groups, as is done in this symposium, it is not meant to imply that any particular case in point should always fall definitely in one division. The fact is that in any case dystocia may be due to several factors. In this discussion we will attempt to consider dystocia due to fetal causes only—that is, cases in which the difficult labor would be due principally to the fetus—its size, shape, or position.

In considering the possible fetal causes, and classifying them, one realizes what a broad subject has been given us for consideration. Any one of the subdivisions would give suffi-

cient material for discussion. If one covered them all he would only hit the high spots. Rather than just barely touch on all causes, we will prefer to treat somewhat more fully those which are common and therefore important, and will give less attention to those which are rare and infrequent.

The following classification of fetal dystocia is presented for consideration:

1. Dystocia due to abnormally large fetus.
2. Dystocia due to fetal malformation.
3. Dystocia due to difficult positions and presentations.

I. DYSTOCIA DUE TO ABNORMALLY LARGE FETUS

Experience has taught us that excessive size of the baby is rather characteristic of some mothers. We occasionally see patients who give a history of having given birth to very large babies—so large that a normal sized pelvis is not sufficiently large to allow a normal labor. The reason for this excessive growth of the fetus is not always evident. The most likely conjecture is that this is an intrinsic condition of the ovum. This condition is occasionally seen when either parent is particularly large. The relative size of the father's head is often an index of what the fetal head may be. Large babies usually have skulls that are well ossified, and do not mold well on pressure. The fact remains that for some reason these parents usually give birth to babies so large that dystocia results.

A great deal has been said of diet in relation to size of the baby. In a small way diet probably does influence the size of the fetus. Williams reported years ago that women of the poorer classes, when admitted to the hospital and given better diet, would invariably have somewhat larger babies than women of this class who remained at home. Prochownick has recommended a diet low in carbohydrates and fluids in order to reduce the size of the fetus. While it is true that such diet, pushed to extreme limits, may result in a baby with very little adipose tissue, and hence of lesser weight, the fact remains that the bony frame and skull are not altered by such diet. Our experience with such attempts at diet make us very doubtful as to its value. It would seem then that in these patients who habitually have these large babies we must find a cause and solution other than diet.

In this connection we must consider the question of overtime babies. Does a pregnancy ever go beyond full term and thus cause a large fetus? This is a very difficult question to answer, as the duration of pregnancy is not always the same. We do not know when a pregnancy begins—that is, we never know the date of fertilization of the ovum. For that reason we cannot predict exactly when it should end. All we can reckon from is the date of the last menses and the fertilization of the ovum may occur considerable time afterwards. The writer has never observed a patient whose pregnancy could be definitely stated to have lasted for ten months, and we are rather skeptical. However, other men report such cases and their observation cannot be disputed. What shall be the treatment of such patients, where dystocia is caused simply by the oversize of the fetus? The usual history is that such patients have lost one or more large sized babies after difficult labors. Examination shows no abnormality in shape or size of the pelvic girdle. As hinted at previously, we are doubtful about reducing the baby's size by diet. This would leave for consideration the choice of two other methods. Labor could be induced early, at seven and one-half or eight months, or the patient could be delivered at term by Caesarean section. Early induction of labor was rather popular some years ago. The disadvantage of this procedure was that the exact age of the fetus was difficult to determine, and one felt chagrined after induction of labor to deliver a fetus that was hardly mature enough to live. With the development of Caesarean section premature induction of labor as a prophylaxis for dystocia from this cause has gradually lost its ground, and now Caesarean section is distinctly indicated for patients who have previously lost babies because of dystocia due to oversize of fetus. With the development of the low cervical Caesarean section these patients can even be given a chance to deliver the next baby normally, and low cervical Caesarean section can then be performed if a test of labor shows vaginal delivery unlikely.

II. DYSTOCIA DUE TO FETAL MALFORMATION

As stated in the introduction of this paper, it is not our intention to go into detail about all the possible malformations of the fetus that might interfere with normal labor. Most of these are so rare that they might never be observed even in a lifelong busy obstetric practice.

The most common fetal deformity in this division is hydrocephalus, but even this is quite rare. It occurs probably about once in 2,000 cases. The enlargement of the head varies from only a slight degree to a size that may be larger than an adult head. The head enlarges, or becomes distended, from the accumulation of fluid in the cerebral ventricles. As the ventricles distend the sutures separate widely, the fontanelles occupying large areas on the head. The degree of dystocia caused depends on the size of the distended head. Commonly associated with hydrocephalus are spina-bifida, club-foot, and hydromnios. Mild

degrees of hydrocephalus are rarely diagnosed during pregnancy, although the diagnosis may be made after the rupture of the membranes. The cases of extreme enlargement can often be diagnosed in advance. The enormously enlarged head can be felt floating above the superior strait, or it can be felt in the fundus of the uterus. In one case under our observation the patient consulted us, asking an explanation for the huge mass she could feel in the upper part of her abdomen. However, most cases are first diagnosed during labor. The labor has not advanced or has not terminated spontaneously as was expected. An examination then may reveal the wide gaping sutures and the enlarged fontanelles. In breech presentations the diagnosis often is not made until it is found that delivery of the after-coming head is impossible.

The writer recalls a case of hydrocephalus seen during labor several years ago. The physician in attendance had been expecting a spontaneous birth as the fetal scalp could be seen separating the labia about one and one-half centimeters. This part of the scalp had been in sight for six hours and no progress had been made. The patient had been in labor 48 hours and was very fatigued. She was a Christian Scientist and had insisted that she would deliver the baby spontaneously. However, the advice to terminate labor was accepted. She was anesthetized and a catheter was passed to empty what was thought to be a very full bladder; but the catheterization did not remove the huge suprapubic swelling. Examination then showed that this mass was a huge head, presenting at the vulva, and extending above the umbilious. The head was so flaccid that a prolongation had been forced into the pelvis, while the major part was still above the superior strait. After being given permission by the husband, the head was perforated and the fluid drained off. There was then practically nothing left to which obstetric forceps could be applied. A couple of hemostats were clamped on the scalp wound at the site of the perforation, and by gentle traction on these the fetus was delivered. We were amazed to find the fetus still alive. The scalp was closed with catgut sutures. The fetus lived for 36 hours.

The treatment of hydrocephalus is perforation of the head. Apropos of our experience with a living fetus, we would like to quote the following from Dr. J. Whitridge Williams:

"In evacuating the hydrocephalic head, it should be borne in mind that, owing to the extreme thinness of the brain, mere perforation is not necessarily synonymous with fetal death. For this reason the perforation should be caried to the base of the skull and vigorously manipulated in order to destroy the medullo, as nothing could be more horrible than the extraction of a living child after such an operation."

Double monsters may be a decided cause of dystocia. But they are extremely rare, and in nearly all cases are capable of delivery per vaginum, because of the movability of the separate parts. It may be necessary in some cases to amputate one part before delivery can be accomplished. These malformed fetuses rarely develop to full term, and this prematurity also is an aid in delivery. Records show that most monsters of this type are delivered per vaginum, which leads one to think that the dystocia caused is not as serious as might appear at first thought.

There are also a few rare conditions in which the body of the fetus becomes so much enlarged as to make delivery difficult. Enlargement or distention of almost any abdominal organ may be the cause of this. Reported cases of this type show that the abdominal enlargement may be due to congenital cystic kidneys, distended bladder, ascites with fetal peritonitis, fetal edema, benign and malignant neoplasma. As in hydrocephalus, perforation is usually necessary to accomplish delivery. This can be done after the entire hand had been introduced into the uterine cavity and the fetus carefully palpated. In all these cases with abnormal fetus the diagnosis can only be made by thus directly palpating the parts inside the uterus.

III. DYSTOCIA DUE TO DIFFICULT POSITIONS AND PRESENTATIONS

In writing the heading for this division, careful attention was given to its wording. These positions are designated as difficult rather than abnormal. It is true that some of the positions and presentations are difficult, but one could hardly call all of them abnormal. This is particularly true of posterior positions and breech presentations. These should be classified as normal, although they may cause difficulty.

Of all fetal causes of dystocia, posterior positions are the most common. In fact, this statement would be equally true of all cases of difficult labor, whether due to fetal or other causes. The frequency of posterior position varies with the observer. Many cases go without diagnosis simply because they are eventually delivered as anterior positions. All posterior positions do not cause difficult labor, and these are the ones where the diagnosis often is not made. But for the frequency with which real hard labor is produced nothing is quite equal to the posterior position. Posterior positions occur in about 20 to 50 per cent of all cases. In our experience it has occurred in fully 30 per cent of all vertex cases. Every case is one of potential trouble. These positions may cause difficulty by failing to engage in the superior strait, or by failure to rotate after reaching the pelvic floor.

Failure to become engaged is a common oc-

currence in these positions. Its cause is readily understood when one visualizes the shape of the pelvic inlet. With an anterior position the large bi-parietal diameter of the head readily enters the long diagonal diameter of the inlet. With a posterior position this large bi-parietal diameter must enter the pelvis farther posteriorly and here the pelvic diameter is smaller. Or if the bi-parietal diameter of the head enters the largest diagonal diameter of the pelvis, then the anterior half of the head must over-ride the pelvic bone. With a large pelvis engagement may occur readily, but with a fetus that fills the pelvis snugly engagement becomes very difficult. Proper molding may finally allow the head to engage, but molding is usually delayed, for after all, molding is due to counter pressure from the pelvic walls, and as long as the fetus is not engaged conditions for molding are not very favorable. Uterine forces are exerted at a great disadvantage and there is no help from the abdominal muscles. By prolonged effort the head is finally engaged in the majority of cases. Those that do not engage severely tax the judgment of the obstetrician.

After the vertex is engaged and reaches the pelvic floor, there is still an obstacle to overcome. The rotation of 135 degrees is usually not accomplished as easily as the shorter rotation in anterior positions. In cases where engagement has been delayed there is often uterine fatigue by the time the pelvic floor is reached. However, with descent of the head the uterine force is exerted to a better advantage, and the abdominal muscle can be used with better result. Thus the vertex will finally rotate in most cases, and then the remainder of the labor is usually easy.

The picture thus presented is one of a long difficult labor, with slow dilation of the cervix, slow rotation, association of considerable inertia and fatigue, but with eventual normal delivery. We still believe that conservative treatment is the proper thing for posterior positions. If given plenty of time, most of these patients will eventually deliver their babies spontaneously. This does not mean that there has been no dystocia. One must remember that the natural forces can overcome a great deal of dystocia.

But there are a certain number of cases where conservatism fails, and these patients need assistance. These may tax the judgment of the best trained and conscientious obstetrician. Hard and fast rules can not be applied. Treatment will depend a great deal on the progress of labor. In most cases no obstetric treatment is called for as long as the cervix is not fully dilated. Occasionally a Voorhees bag may be inserted into the cervix to aid dilatation. The use of morphine and sedatives will often help to support the patient until the cervix is completely dilated.

But with the cervix completely dilated, with no results from a conscientious effort at conservatism, what can be done? Here again treatment will depend on conditions. If the head is high up and not engaged, the writer would recommend version as the best method of delivery. We are not recommending wholesale version as performed by Potter. But we would recommend version in these cases in preference to high forceps delivery, or Caesarean section. We would be very slow to recommend a Caesarean section when there was no other cause for the dystocia than the posterior position.

If the arrest occurs at the pelvic floor by failure of rotation, the treatment of choice would be delivery by forcep operation after rotation of the head. Emphasis should be made of the point that in these cases the head should be rotated into an anterior position before delivery is attempted. The difference between rotation and lack of rotation may be the difference between an easy and a difficult forcep extraction. The method of rotation can be a choice of the obstetrician. After trying both instrumental and manual rotations we now perform the rotation manually in nearly all cases.

The danger to the fetus in a posterior position is that of cerebral injury or hemorrhage; and let us remember that this can occur in a baby delivery spontaneously as well as in one delivered instrumentally. A great deal has been written lately about the condition of the fetal heart as an indication for interference. We are willing to subscribe to the importance of this procedure. But in many cases it leads to treatment far too radical. The obstetrician listens to the fetal heart and if it is too fast or too slow he is worried and to save the baby a rapid delivery is performed. If in such a case the delivery promised to be easy one might endorse such proceedings. But if the delivery promised to be difficult it would seem that the difficult delivery could be even more disastrous to the baby than a prolonged labor. Here is where one's judgment will be taxed. Personal ability and confidence and experience will be factors in deciding what course to take.

We can not leave the subject of posterior position, considered altogether too hastily, without registering a protest against the radicalism that has crept into the practice of obstetrics in the treatment of posterior positions.

Face and brow presentations are usually classified together, but are far from similar as far as causing dystocia is concerned. It would seem as if much more difficulty is ascribed to face presentations than is actually the case. We wish to emphasize the fact that most face presentations are not very serious, and most of

them will result in spontaneous birth if left alone. This fact should be emphasized more strongly in our texts, and the student should not be taught that a face presentation is something so awful. When one finds a face presentation he should not immediately think of version, forcep delivery, or Caesarean section. He should remember that most face presentations are anterior positions, and as such usually end in spontaneous birth. It is only the posterior face presentations that are severe causes of dystocia, and the posterior face presentation is very rare indeed. This position has been called the "impossible position." But even this is "impossible" only when the chin rotates into the hollow of the sacrum. In such a case an attempt can be made to flex the head and convert it into a vertex presentation or a version can be performed. For these procedures complete anesthesia is necessary. In cases where the fetus cannot be pushed up sufficiently to perform either of these maneuvers Caesarean section should be performed.

Brow presentation is a very different problem. It causes a severe dystocia in nearly all cases, and a spontaneous birth with a brow presentation is among the rarities, because the largest diameter of the head (occipito-mental) must engage. Delivery can be accomplished in some cases by forceps after flexion of the head, or by version, and in some cases by Caesarean section. Practically all require some form of operative assistance, the nature of it depending on the obstetrician's training. A Caesarean section is always the simplest way out, but is not always an evidence of high obstetric training. There are other good obstetric procedures besides Caesarean section, but they require much more skill in their performance.

Transverse presentations are a definite source of dystocia. This occurs rather more frequently during premature birth than at full term. Spontaneous evolution, by which process a spontaneous birth results can occur with a small, pliable, premature fetus, but can hardly be expected to occur with a well developed, full-term fetus. In most cases version is the treatment of choice. If the cervix is not dilated completely a Voorhees bag can be used to aid dilatation, and then version performed as soon as the cervix is dilated.

A breech presentation is really a normal presentation and most breech presentations result in normal birth. A difficulty that often arises is the early rupture of the amniotic sac. The breech is a poor dilator, and thus early rupture of the membranes may cause dystocia. When this occurs it is best to treat expectantly and dilation, though slow, will usually be accomplished. The occasional case which does not dilate well can be treated with a Voorhees bag.

The writer believes that most trouble that occurs during the delivery of a breech presentation is due to too early attempts at delivery. It is nearly always possible to pull a breech through a partially dilated cervix. But then the difficulty comes in delivering the head. This difficulty can be prevented in most cases by not attempting to actively deliver the breech. Allow labor to continue and allow the breech to be expelled spontaneously. After that the delivery of the head will rarely cause trouble. In general if assistance be necessary let it be pressure from above, rather than traction from below. In this way the troublesome extensions of the head and arms will be prevented. A high after-coming head can be more easily made to engage in an oblique diameter than in the antero-posterior diameter of the inlet.

Twins may be a cause of dystocia by the occurrence of collision or locking of the presenting parts. This does not happen often as usually each fetus is enveloped by a separate amniotic sac. When collision or locking does occur one fetus can often be pushed up to allow delivery of the other. If this is impossible, decapitation of the first child may be necessary.

NON-SPECIFIC PROTEIN THERAPY IN ARTHRITIS*

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In the paper by Dr. Warfield the various forms of chronic arthritis have been discussed in detail so that in the time available I shall limit my discussion to the treatment of such cases with non-specific agents, without going into the etiology or into the clinical forms of the disease.

During the course of development of medical science during the past 75 years we can recognize distinct periods of therapeutic effort. Usually these have been oriented by the prevailing pathological interest. Thus the work of Virchow was followed by the period when our therapeusis was directed chiefly toward the amelioration of organ symptoms: while the time of bacteriological differentiation of disease inaugurated an era of specific serotherapy and chemotherapy, the effort being made to directly influence the invading organism while the host remained passive. These may be termed an "etiotropic" agents. We studied the parasite and neglected the normal resistance of the host. Nevertheless, the period was one of brilliant advance in medical treatment.

*From the Department of Pathology, University of Illinois, College of Medicine, Chicago. Read before Section on Medicine M. S. M. S., Grand Rapids, September, 1923.

†See issue of December, 1923.

Now we seem to be entering a wholly different epoch in that greater emphasis is being laid on the study of the natural resistance of the organism to disease, viewing the body as a whole, rather than taking up partial functions and phenomena. The constitutional factor in resistance to infection and recovery from disease is coming into the foreground. Not "etiotropic," but "ergotropic" agents are sought that will stimulate the normal methods of defense of which the body is possessed and in this way hasten recovery.

HISTORY

I shall not at this time enter into the history of our recognition of this form of therapy except to call attention to the fact that non-specific or "Protein Therapy" in some of its forms, represents our oldest biological therapeutic measure. The cautery, the seton and the fontanelle, the fixation abscess, bleeding, counter-irritation in all its forms, all belong in this category. The effects of heliotherapy, of baths and massage and even some of the delayed effects of roentgen therapy must be included as well. They have all been used empirically, with wholly irrevelant theories proposed to explain their therapeutic effect. Many of them, as you have gathered from Dr. Warfield's remarks, are still the most satisfactory remedial methods that we possess in our treatment of arthritis.

Our modern conception of non-specific therapy dates back about 10 years, when several clinical observers reported startling therapeutic results from the intravenous injection of typhoid vaccine in typhoid fever. (Ishikawa, Penna, Kraus, etc.). In itself this seemed an illogical procedure. To add more toxic material to an organism already suffering from the effects of such poisons seems irrational. Nevertheless, the results were striking, a certain number of the cases terminating by crisis, others by prompt lysis, in still others, the clinical symptoms were improved although the patient not cured. The results were not specific in the bacteriologic sense. Paratyphoid fever was cured by typhoid vaccine, typhoid fever by colon vaccine, and finally it was found that typhoid vaccine would influence a number of diseases that had no relation whatever to typhoid infection. (Heterobacteriotherapy.)

SUBSTANCES USED

It was not long before a great number of other substances were tried, protein split products (proteoses, peptones, etc.), bacterial split products (typhin, bacterial autolysates) native proteins, milk and milk products (casein). Then it was surmised that some of the previously used agents might be active in the same fashion and nucleins, colloidal metals, immune serums, tuberculin and turpentine were investigated from this point of view. And now we add the physical agents, heliotherapy, baths, skin irritations of various kinds, as well as some of the late effects of roentgen irradiation to the same group. Finally, some of the therapeutic effects following the use of the so-called "endocrine preparations" are merely due to the non-specific protein injection. This by no means exhausts the agents that have been used, most of them quite empirically or at best with a wholly different theoretic basis for their employment.

COMMONLY EMPLOYED AGENTS

In general it may be stated that the methods commonly employed are the following:

A. For intravenous injection: *Typhoid vaccine,* dosage from 10 to 50 million. This produces a marked "Protein shock" reaction, with chill, fever, sweat, etc. It is only used at present when a severe general reaction is desired.

Peptone. Used by Auld in England as well as by French clinicians. Dosage varies with preparation. Practically no reaction in the normal individual: varying severity in different diseases.

B. For intramuscular use. *Milk Injections.* Boiled market milk, dosage from 5 to 10 c.c. Moderate local and general reaction.

C. For subcutaneous and intracutaneous injection. *Case in preparation.* Dose varies from 1/10,000 c.c. in chronic arthritis to 1 c.c. Produces little general reaction, but may induce a well marked focal reaction.

D. For continued injections. Intramuscular Injections of Turpentine. Dosage about 1 c.c. 1/5 turpentine in olive oil, usually some analgesic added. Produces a minute intramuscular abscess (sterile) from which products of cell disintigration are absorbed. Used particularly in certain skin diseases and in gynecological practice.

GENERAL AND FOCAL REACTIONS

General Reaction: Depending on the agent used, the dosage, and the condition of the patient, a systematic reaction will take place after the injection of the non-specific agent. It includes a rise in temperature after a preliminary chill, a leukocytos after a preliminary leukopenia, sweating, and increased metabolic rate, alterations in the serum concentration, in antibody and enzyme concentration, alterations in nervous irritability of

the central as well as in the vegatative nervous system, a change in blotting time and a number of other phenomena. Malaise is first intensified, later euphoria becomes manifest; occasionally the latter is transient, sometimes continued.

THE FOCAL REACTIONS

Very early in the study of non-specific therapy it was observed that a focal reaction might take place wherever a pathologic lesion existed in the body. This is, of course, of utmost importance for us in the arthritic group of diseases because we can directly observe the reaction and need not depend on subjective symptoms.

In chronic arthritis such a focal reaction may become manifest as merely a sensation of tingling or burning of the joint, increased tenderness or pain on motion stiffness or spasticity. Objectively the reaction may consist merely of slightly increased hyperaemia, or in the more marked cases, marked inflammation with swelling and local increase of temperature. Such reactions may set in within a few hours after an injection.

THE MECHANISM OF THE REACTIONS AND THE THERAPEUTIC EFFECT

Both the general and the local reactions depend on a common biological alteration produced by the non-specific injection. This consists primarily of an increase in the permeability of cell membranes. Increased cell permeability is intimately associated with cell stimulation and the term "omnicellular plasma-activation" although a bit cumbersome, has been applied to non-specific therapy and probably correctly.

When we deal with an inflammatory focus, such as a chronic joint, we deal with cells that are more permeable than normal cells. First, because they are young cells (prolinferation) and secondly, because they are irritated (stimulated) by the etiologic agent, whatever it may be. Such cells will more readily respond to a circulating protein or other non-specific agent than will cells which have only a normal permeability. Here we have the basis for the focal reaction in its simplest terms.

But in order that a chronic focus may heal, one of two reactions must take place. (1) The inciting factor must be removed by bacteriolysis or by digestion. If the forces are in equilibrium, as they are in the usual chronic infection, this does not take place. If we can accentuate the inflammatory reaction, the defensive and repairative forces of the organism may completely overcome the injuring agent. (2). On the other hand, the area may be completely walled off from normal tissue activity and recovery take place by exclusion. This is, of course, the normal mechanism in tuberculosis.

Non-specific agents evidently act through the first of these two methods and if we once grasp this principle, which is a very old one in medicine, the logical employment of non-specific agents follows.

THE TREATMENT OF ARTHRITIS

The first American clinicians in treating arthritis by non-specific injections were Miller and Lusk in Chicago: Cowie in this state has also treated a large series. They worked with typhoid vaccine, using a relatively large dose and depending on the general reaction of the patient to overcome the joint condition.

In the treatment of acute articular rheumatism and acute gonorrheal arthritis such treatment is justified and the results have been satisfactory. Some 30 per cent are cured after a single injection, another 30 per cent after the second and third injection and the balance of the cases considerably improved. Many of these are cases which are not improved after salicylate medication.

It must not be supposed that the percentage of recovery is particularly remarkable. Under rest and salicylates alone about the same number would recover in the course of time. It is simply a question whether the prompt termination of the disease is of sufficient value to the patient and society. From the economic viewpoint there is much in favor of such a method. Then, too, we must consider the question whether or not we prevent the development of carditis. It is my impression that the prompt termination of the disease does have this effect, although I can present no statistical evidence that will prove this contention.

When now we turn to the chronic arthritides we occasionally hear the statement that "protein therapy" was tried, but without permanent improvement. By "protein therapy" in this case the clinician almost invariably implies the intravenous injection of typhoid vaccine or some similar drastic agent. *Yet in chronic arthritis such measures have absolutely no justification.* It is not only useless, it may greatly injure the patient. I cannot insist too strongly on the absolute fallacy of such treatment.

The lesion in chronic arthritis is an exceedingly sensitive one and responds with a focal reaction, as we know from experience, to a great variety of seemingly remote alterations, the jarring of a train, a dietary indiscretion, climatic change, emotional upsets, a remote trauma, to mention but a few.

Similarly the lesion is most sensitive to the injection of any of the non-specific agents, in some instances a dose of 1/10,000 of a c.c. of casein (5 per cent) has been found sufficient to elicit a focal reaction.

As a general rule it may be stated that in chronic arthritis an initial dose should be found that is below the threshold of the focal reaction: that at weekly intervals the dose should be increased until the first evidences of a focal reaction are obtained (tingling in joint, slight increase in pain or of stiffness): for the following injections this dose should either be diminished or slightly increased, always using the focal reaction as a criterion for further dosage.

In chronic arthritis the dose must not be repeated too often at short intervals. A course of weekly injections extending several weeks is best followed by an interval of rest.

The largest series reported treated by non-specific means is that of Zimmer (1) from Bier's Clinic at Berlin. Zimmer has treated 2,000 chronic arthritides and including practically all forms of the disease. The Policlinic material was treated wholly with non-specific injections: with his private material Zimmer has made use of our other physical methods (massage, irradiation, diathermy, etc.) His paper should be studied by everyone interested in the treatment of chronic arthritis, because the work opens the way to a rational treatment of a group of disabling diseases with which we have heretofore been relatively unsuccessful.

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CHRONIC INTESTINAL INDIGESTION*

WILLIAM S. O'DONNELL, M. D.

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Chronic intestinal indigestion is a disease of marked interest to the pediatrist. It is named by English authors, "celiac disease," and has been described by Herter in a monograph as "infantilism."

Chronic intestinal indigestion occurs in children from one to six years of age. It is found most often in bottle fed babies. In its typical form the condition is always chronic. The children are markedly undersized and underweight. The abdomen is large and measures from one to three inches more than the chest. Due to the large distended abdomen and small extremities the "pot belly" of these children is the most noticeable feature on examination. The children are very irritable and cross. The reflexes are exaggerated. X-ray examination shows delayed development of the bones. The muscles are small and weak. The bowels are alternately constipated and loose. The stools are large, gray or green in color and have a foul odor. At periods for a day or two diarrhea occurs. There is marked variation in weight from day to day. The loss of weight usually follows the passage of a large, copious stool. The stools contain a large amount of mucous. Undigested starch and an excessive amount of unabsorbed fat are also present. The cardinal symptoms in making a diagnosis of chronic intestinal indigestion are, emaciation, great fluctuation in weight, protruding abdomen, large, foul, soapy stools, and an intolerance to fat in the food.

In considering the differential diagnosis, tuberculous peritonitis and Hirschsprung's disease are easily excluded. In tuberculous peritonitis the positive skin tuberculin reaction is usually present. Under anesthesia it is also possible to palpate the mesenteric glands which are involved by the tuberculous process. Hirschsprung's disease is always congenital and can largely be excluded on the history. Also, in this condition the abdomen is considerably larger than in intestinal indigestion.

The etiology of chronic intestinal indigestion is obscure. Nothing significant can be directly attributed as the cause. In studying the reports in the literature of this disease by various competent authors, one is impressed by the fact that no one single factor, breast feeding, proper regulation of the diet, social status, as the disease occurs frequently in well-to-do families, can be directly given as the underlying cause.

The pathology as given by Dr. Wollstein is as follows: The stomach is invariably normal, as is also the duodenum and the upper ileum. In the lower ileum usually, and throughout the colon always, the mucous membrane is swollen and pale. It is covered with a moderately increased amount of mucous and the solitary lymph follicles are enlarged, pigmented, but never ulcerated. If the colon is distended with gas the walls seem thin because they are stretched. When the gut is empty its walls are of normal thickness. Microscopically the epithelium covering the mucosa is often lost over smaller or larger areas. The deeper part of the mucosa shows a moderate amount of cellular infiltration, and the lymph follicles are packed with lymphoid

*From the Department of Pediatrics and Infectious Diseases, University Hospital, Ann Arbor, Mich. Read before Michigan State Medical Society, September 13, 1923.

cells. The submucosa, muscle coats and serosa are not infiltrated, and consequently are of normal thickness.

CASE REPORT

The following case history of a child, studied at the University Hospital during the past four months, is presented here. This brings out the salient features of the disease and demonstrates the results of the treatment of chronic intestinal indigestion.

Baby F. was two years old on admission to the hospital. She was of Italian parentage. The family history is negative. The past history shows that she has suffered from upper respiratory infections. The nature of these was not determined as she was never examined by a physician during any of her illnesses. The feeding history states that she was breast fed for three months. She was then put on cow's milk. No specific dilution was given. She was allowed to take whatever she wished. At the age of six months she was receiving whole milk. At this time also she was given starchy foods, cereals, potato, rice and vegetables of all types. No particular attention was paid to the preparation of the food. She has had attacks of diarrhea since she was nine months old and has failed to gain since this period. She was finally seen by a physician on account of the difficulty in feeding her. The physician recommended her admission to the hospital.

Physical examination: The child is small, markedly under-nourished, weighs 14 pounds at two years. She is pale. The muscles are flabby. The most noticeable feature on inspection is the protruding abdomen, in contrast to the size and development of the extremities. The child is unable to walk on account of weakness, there being no deformities or loss of function in the extremities. The rest of the physical examination is essentially negative. The blood shows a secondary anemia, R. B. C. 3,500,000; W. B. C. 8,500; Hgb. 60% (Sahli). The urine is pale, acid. Sp. Gr. 1.016; albumin neg.; sugar neg.; Indican positive, four-plus. Sediment neg. Stool examination shows a large stool, gray in color, greasy, due to the presence of large amounts of fats and soaps. The chemical tests for fats and soaps in the stool show these substances to be present in large amounts. Mucus is present in large amounts. There is an absence of HCL on examination of the stomach contents.

The child on admission was given two 150 c. c. blood tranfusions on acount of the poor general condition. She was put on lactic acid milk with Karo corn syrup, eight ounces five times a day, with the casein curd of one pint of milk added to increase the protein intake. During the first three weeks of treatment she had alternating attacks of diarrhea and constipation. However, she was kept on the same formula and by the end of the sixth week she had gained two pounds. The child's appearance at this time was considerably improved. Her color was better. The irritability present on entrance had gone and her sleep was normal. At the end of seven weeks well cooked cereals were added. These were handled without any increase in symptoms. Scraped beef and dried bacon were also added, together with two teaspoonfuls of cod liver oil and the juice of one orange daily. By the end of the tenth week she weighed 16 pounds. The size of the abdomen was decreased one inch by measurement, due to the increase in tone of the abdominal musculature. Cooked vegetables, carrots, peas, and spinach were next added to the diet. The child was unable to handle these on first administration. The vegetables came through wholly undigested in the stool. However, we found that by giving small amounts, a teaspoonful of the vegetables, that we were gradually able to increase her tolerance to this kind of food so that after two months of starting the vegetables, she was able to handle two tablespoonfuls daily. After four months in the hospital she was discharged to a boarding out home. At the time of discharge she weighed 20 pounds, an increase of six pounds since her admission. She is now able to walk and her general appearance has markedly improved. Her blood picture is normal. Her reactions are those of a normal child.

Both patience and persistency are necessary for the treatment of this condition. If this child's feeding is not carefully supervised she will immediately precipitate back into her former condition. The length of time that careful supervision of the diet is necessary cannot be stated for any specific case. But previous experience teaches us that children who once have had chronic intestinal indigestion must be carefully treated for a period of years.

DISCUSSION

DR. BRENNEMANN, Chicago: I have been very much interested in this subject for a number of years. I should say in the first year of my practice, or until the last three or four, I was interested chiefly in how rottenly these cases did. They led a very miserable existence. Many of them—most of them ultimately come to some inherent condition. Personally I rather like the term celiac, rather than chronic intestinal indigestion, because it is a definite clinical entity which I think we ought to emphasize.

Now about four years ago, John Howland, as president of the American Pediatric Society wrote a paper on the chronic intolerance to carbo-hydrates. Characteristically and modestly the paper was buried in the transactions of the American Pediatric Society, and I think very few people have read it. To me it was the only paper that I ever read—I haven't read this yet; I have only heard it—it was the only paper that has given me any light on this subject. Since that time I have had two cases. I followed the suggestions he made at that time, and I have had results that to me were simply astounding. This paper that Howland wrote had not so much to do with celiac disease as with intolerance to carbo-hydrates in children, and only towards the last of the paper—I would advise anybody to read it—only towards the last of the paper did he speak about celiac disease as a manifestation of the same thing. The idea in it was that in celiac disease there is not a fat intolerance but there is a carbo-hydrate intolerance, and that is perfectly plain from the fact you give them any amount of albumen milk and they will stand it, and it contains practically as much fat as cow's milk does. The trouble with carbo-hydrates is they produce a chronic condition as a result of which they cannot take the fats, and the fats are the things that of course determine the peculiarly fatty, greasy, white, objectionable odor of the stools. The point that he made especially at that time was that one ought to give them a high protein diet.

I went home after that paper—it sounded awfully good to me—but since that time I have only had two of those cases. One was a child about six that I had had for a year or two that had done well and poorly; fair and poorly, like that, and always did. I put it on a protein, practically a protein diet. That

child within a year doubled it weight. Then we had a case at the hospital two years before I went there; that child had been in the hospital for two years with absolutely stationary weight. It was five years old and weighed 13 pounds. I put it on practically a protein diet—for a year now it had been stationary in weight—and on that diet it has gone from 13 to 48 pounds.

By a protein diet I do not mean entirely protein. We put the child first on albumen milk, on butter milk, cottage cheese, gelatin broth, di-protein biscuits, and that is all, except after we had been doing this for about three of four months I wondered if she might be developing a scurvy, so I went back over her diet and found that in the gelatin broth they were putting an ounce of orange juice or lemon juice to flavor it; so she was getting the anti-scorbutic element contained in the butter milk or albumen milk and in the orange juice or lemon juice as well. We started her off with Farina, at the end of six months, and after three of four days with a dish of Farina once a day she was not quite so well. At the end of a week she had a definite return of her former condition including a thing I have never seen, hands cramped in a peculiar position, worse than I have ever seen. As soon as we took her off the Farina diet she was all right again. We are now giving her a few other things, including three or four bananas a day. Dr. Hess suggested that; I don't know why; unless he had some of his children on bananas. That child has been for a year on an almost exclusive protein diet.

DR. HESS: I recited my small group of cases, and I might add to what I said that I had autopsies on two cases which showed they had a very marked atrophy of the intestinal glands, both throughout the ileum and the colon. These cases do not respond to the ordinary treatment.

We have been following out pretty much as Dr. Brennemann suggested, except I haven't had any experience with adding the wealth of cereal that Dr. Brennemann speaks of. I have been in habit, about the second week of the treatment, of adding either Farina, Cream of Wheat, or oat meal. I have found some of them do not take the oat meal quite as well as they do the other cereals mentioned.

However, I do not think any one can, as I stated this morning, come to any definite conclusions on the whole group by such limited experience as we had with six cases. There is no question but what a high protein diet does cause a change almost immediately for the better. We were adding fruit juices, orange juice, quite early.

I stated this morning, Dr. Brenneman, that in my entire group all were breast fed for too long a period, covering something like—I think the shortest was seven months to 15 months of breast feeding, and they were all very markedly rachitic. Dr. O'Donnell did not say whether his Italian child was rachitic or not, but I know that these Italian children raised in the slums are very often.

DR. METTEL: An interesting note in this case, I might add to what Dr. O'Donnell said, regarding the etiology is the low acidity of the stomach contents which has been called to our attention by Taylor and others. Many have emphasized the fact that in feeding Bulgarian bacilli, and changing the intestinal reaction, and so forth improvement is secured. It is interesting to note in this child that upon its discharge there was some question as to the practicability of preparing lactic acid milk at home. Dr. O'Donnell put the child on a mixture of whole milk to which he added straight lactic acid.

DR. O'DONNELL: An interesting point brought out by Dr. Hess is that of breast feeding over a long period. This child had only had three months of breast feeding. In an article by Dr. Taylor on celiac disease in one paragraph he makes the flat statement that "This disease does not occur in breast fed babies." Since that time I have looked over the literature and find that it not infrequently occurs in the breast fed.

On the question of milk, whole cow's milk, Dr. Holt in his textbook mentions the fact that these children do very poorly on whole milk. With the addition of lactic acid milk they do a great deal better. During the early days of treating this case after we once had the child under way, to try it out we sent her back into the ward on whole milk; immediately it precipitated diarrhea. I believe the lactic acid milk, besides doing a great deal for the acidity, may also have changed the protein in the milk, but we don't know that; or it may have helped the absorption of the protein.

DR. HESS: When you speak of putting the child on milk, was that raw milk?

DR. O'DONNELL: It was whole boiled milk.

ANTERIOR POLIOMYELITIS COMPLICATING PREGNANCY, WITH REPORT OF TWO CASES*

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The scarcity of any spinal lesion complicating pregnancy has made the study of such conditions rather limited. Few positive deductions and naturally few conclusions are possible.

The writer was stimulated in his study of spinal lesions complicating pregnancy, and more especially anterior poliomyelitis, by the occurrence of two such cases, one under direct observation in the University Maternity Clinic, and the other in the practice of a very prominent physician of this state.

CASE REPORT

The first case—Mrs. B., age 26, para three, was admitted to the University Maternity Clinic on October 8, 1921. The patient's past history was negative. During her 10 years of married life she had had three full term pregnancies, each terminating in a normal delivery. The present illness dated back to September 3, 1921, when she first noticed a chill, followed by a sharp pain in the rectum. This pain lasted about five minutes. Following this, an extremely severe headache with marked leg and backache, was complained of. Two days later the patient noticed, on awakening in the morning, that her legs were very weak. This weakness became more marked until a complete paralysis of both lower limbs, of the abdominal muscles, and bladder sphincter, existed. The paralysis of the bladder sphincter, with incontinence, lasted only 24 hours. Except for a slight recovery in the toes of the right foot, the paralysis had remained unchanged up to the time of admission.

Examination on admission one month after the onset of the disease revealed a four months pregnancy. The patient's general health was fair. Pelvimetry showed a normal pelvis. Neurological examination showed a bilateral foot-drop with a flacid paralysis

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of both legs, except, as mentioned above, for a slight amount of flexion of the toes of the right foot. Sensibility to touch and pain were preserved. All deep reflexes were absent. The spinal fluid was under normal pressure, clear, and showed five cells per cubic millimeter. There was no reduction of Fehlings solution in 15 minutes.

Blood examination showed a negative Wassermann. The hemoglobin was 80 per cent, the red count 4,360,000, the white count 8,950. The urine was normal.

The remainder of the patient's pregnancy was entirely uncomplicated. Casts were applied to the limbs, and daily massage, with intensive and varied exercises for all muscles inaugurated.

On March 15, 1922 the patient's membranes ruptured. A few contractions followed, but for two days the patient had only vague and occasional pains. On March 18, definite rhythmis contractions began. Rapid progress was made, and at 3:00 p. m. of the 18th the patient delivered a six and three-quarter pound male child. The third stage was entirely normal.

Careful examination of the child revealed a slight bilateral club foot. In view of the frequency of club foot, the responsibility for its occurrence in this case can scarcely be credited to the mother's illness.

At the time of discharge from the hospital, the mother's general health was good. Her paralysis, however, was but slightly improved. In addition to the flexion of the toes of the right foot, a slight control over the abdominal muscles had been regained. The child was in good health and the condition of the feet greatly improved. On September 11, 1923, a year and a half later, the condition of the mother changed but little. The patient was unable to walk, even with assistance of crutches. The child was well and apparently normal.

Case No. 2. Through the kindness of Dr. George Kamperman of Detroit, I am permitted to report here a second case. This patient, a nullipara, had shown, immediately following the onset of poliomyelitis, a complete paralysis of the left leg with urinary and fecal incontinence. The fecal incontinence had cleared up early. The paralysis of the bladder had remained, resulting in an extremely severe cystitis. When seen by Dr. Kamperman, the patient was six months pregnant. Her condition was extremely poor and septic, and the paralysis of the left leg and bladder was still complete. The abdomen was distended and the temperature considerably elevated. Apparently the chief cause of the patient's poor condition at this time was the fulminating cystitis. Hoping to improve this condition, a vaginal cesarean was performed. Almost immediate improvement in her general condition was noted. Her temperature rapidly returned to normal. The bladder paralysis, curiously enough, continued for three months longer, normal function returning at the end of that period. Improvement of the left leg continued, and at the present writing the patient is able to be about on crutches. The child, though still-born, was in no way deformed.

At a glance one might expect a study of the literature to reveal many cases such as those just reported, and although there is much literature on anterior poliomyelitis, there is an extreme dearth regarding this condition as a complication of pregnancy. This is striking when we consider that there have been over two hundred epidemics of this dreaded disease since it was first reported by Michael Underwood, in 1784. (6). A careful study of both domestic and foreign literature has revealed no clear-cut case of this complication. This may be accounted for in several ways. Many cases which appeared to classify under this heading, on closer inspection were either not poliomyelitis at all, or of such vague and indefinite description that they could not be utilized as bona fide cases. In all, at least eighteen different names have been applied to the condition. Other cases, no doubt, have occurred, but have remained unrecorded, or possibly undiagnosed.

In the study of this condition as a complication of pregnancy, it is of primary importance to remember that poliomyelitis is an acute infectious disease and its effect upon the general health of the fetus as well as the mother, must be considered.

EFFECT OF THE DISEASE UPON PREGNANCY

In so far as the two cases studied permit conclusions, the direct effect upon pregnancy seems slight. With the onset of secondary complications such as the cystitis in the last case reported, an extremely critical situation might arise. While the temperature may be sufficiently high to endanger pregnancy, it is usually of such short duration that any danger from this source would be slight. The extent of the paralysis is extremely important. Generally this is not sufficient to interfere with the normal functioning of the vital organs of the body. Where, however, the paralysis involves the diaphragm or other respiratory muscles, considerable danger exists, not only for the life of the mother, but the fetus as well. Fetal death from such a severe respiratory disturbance might well occur. In the first case reported, there was a temporary paralysis of the bladder. This paralysis is not usual in the typical cases, and where it does occur, is usually of short duration. In the second case reported, a marked deviation from the rule is to be noted. Should this condition continue for any length of time, it is reasonable to expect such complications as might arise from a severe cystitis. The seriousness and degree to which this might extend have been well shown in case number two.

EFFECT OF THE DISEASE UPON THE FETUS

The possible effects upon the fetus are manifold. Although the child in the first reported case showed a mild bilateral club foot, it cannot be concluded that this was due to the mother's illness. Of paramount importance here is the question of transmission of the virus from mother to fetus, with the accompanying paralysis. How extensive this paralytic involvement might be should transmission occur, can, of course,

be only surmised. It seems reasonable to assume, in view of the numerous available facts, that transmission of the disease from mother to fetus in utero might easily occur. Thus Rosenow (5), in 1918, demonstrated selective localization by injecting streptococci, isolated from lesions from a certain part of the body, into animals, and showing similarly localized lesions in a large percentage of cases. The transmission of measles, scarlet fever, and so forth, has been reported. Kramer and Wright (4) reported the case of a woman eight months pregnant, who died of cerebro-spinal meningitis before delivery. Autopsy revealed extensive congestion with pus formation over the meninges in both mother and child. Bacteriological tests revealed similar organisms. With these facts before us, and recalling that anterior polomyelitis is an acute infectious disease, the possibility of fetal involvement becomes very apparent. The fact that the disease is primarily one of children might have a tendency to favor fetal involvement. On the other hand, the question of a passive immunity must be considered. If this exists, the danger of fetal involvement need not be seriously considered. If the immunity is not great, and the transmission of the virus takes place, the condition will probably be manifest in the fetus as the socalled abortive, rather than the paralytic type. The question of fetal asphyxia has already been mentioned. When the maternal paralysis involves the diaphragm or other important respiratory muscles, the circulatory and oxygenating processes may be so deranged as to render fetal asphyxia probable.

EFFECTS OF PREGNANCY UPON THE DISEASE

In so far as the two cases reported are concerned, no definite answer to this question can be made. In the first reported case, the pregnancy went to term. In the second case, pregnancy was interrupted at the sixth month. The latter individual has made considerable gain and improvement. Whether this improvement was the result of an early emptying of the uterus and its effect upon the primary disease, or simply the diminishing of the burden in an extremely sick woman, cannot definitely be stated. More cases must be available for study and observation before this question can be answered. Indeed, it is quite possible that emptying of the uterus at such a crucial time might be extremely detrimental rather than beneficial.

EFFECT OF THE DISEASE UPON LABOR

This is probably the most important question of all. The question is frequently raised as to whether normal uterine action may be expected or not. The probability of a normal delivery necessarily depends on several factors: The extent of the paralysis; the condition of the patient; the size of the child, pelvis, etc. I shall not go into detail regarding the nerve supply to the uterus, because it is still a much debated question and apparently of little importance so far as delivery is concerned. It has been quite conclusively shown that the action of the uterus is principally myogenic rather than neurogenic. Barber and Copenhaver (1) have shown the existence of a definite cerebral influence over the volume of the uterine cavity, but the importance of this during labor is probably not great. Animal experiments have conclusively demonstrated that all parts of an excised uterus. whether pregnant, multiparous or virgin, show automatic, rhythmic contractions, and further, that normal delivery may take place with all nerves to the uterus severed. Cushny (2) concluded from his observation on animals, that the contractions of the uterus on mechanical or electrical stimulation were purely muscular and not nervous in origin. In the human, very similar results have been observed. Thus, Jackson (3) reported a normal painless delivery in a woman with a spinal cord tumor of three years standing, with complete paralysis below the waist. Reports of somewhat similar occurrences are not uncommon.

The first stage of labor may be normal, as reported in case number one in this article.

During the second stage of labor, however, slow progress is to be looked for, especially if the voluntary forces which are principally active during the second stage, are paralyzed. With this prolonging of the second stage, indications for interference would necessarily increase. That the entire process of labor may be nearly normal, was well demonstrated by the case reported from the University Clinic. Where prolonged bladder paralysis exists, such as noted in the second case, the possibility of hemorrhage following delivery must be thought of. In this respect a full or distended bladder might interfere with the normal contraction of the uterus during the third stage, and increase the tendency to postpartum bleeding.

Since only two cases were available for study, no conclusions can be made. A few general statements, however, may be permissable.

1. The effect of pregnancy on anterior poliomyelitis remains a debated question. Observations on the two cases reported reveal the two extremes. In case number

one, the pregnancy did not seem to aggravate the disease. In case number two an extremely serious secondary complication arose.

2. The direct effect of anterior poliomyelitis on pregnancy would seem slight. That pregnancy may be endangered through concommitant complications is shown in case number two.

3. The advisability of interrupting pregnancy for this condition is yet to be determined.

4. The fetus is not necessarily affected by the disease.

5. Normal delivery in pregnancy, complicated by anterior poliomyelitis, is possible.

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INSUFFLATION OF THE FALLOPIAN TUBES IN ITS RELATION TO THE STERILITY PROBLEM*

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The development of this phase of the study of sterility has been very rapid since the appearance of Rubin's first article only three and one-half years ago. Previous to this there had been several attempts at injecting Collargol and X-raying the resulting shadows. The results were disappointing to the investigator and frequently disastrous to the patient. Then came the use of oxygen by the radiographer in outlining the abdominal and pelvic viscera. At first the transabdominal route was used. Then it was suggested that in female patients the same result might be accomplished by injecting the gas through the cervix. The frequent failure of this method revealed the possibility of detecting the permeability of the tubes and led to the development of Rubin's method. Originally oxygen was used, although previous experiments had shown that it is 24 to 36 hours before it is completely absorbed, while CO^2 is absorbed in about 30 minutes. Since the appearance of Rubin's work it has been taken up by many men all over the country and further simplified so that now it is an office routine in the handling of sterility cases.

The value of pneumoperitoneum in radiographing the pelvic viscera is not for this paper to discuss. A careful history and a thorough bimanual examination will reveal practically any gross pelvic lesion, but tells us nothing about the condition of the lumen of the tubes. Consequently the insufflation of gas fills a gap in the knowledge of our cases which can be filled in no other way. Uteri, which were formerely dilated and curetted, and insulted with stem pessaries, are now investigated to determine the permeability of the tubes before they are subjected to operative procedures. If we can claim no other accomplishment for our method, we can at least save many women from gynecological tinkering.

It has been quite definitely shown that insufflation is contra-indicated during menstruation, pregnancy, acute pelvic infection and endocervicitis. While this general statement appears in nearly all the articles on the subject, definite case reports are rare where disaster was encountered as a result of faulty selection of cases. Consequently one of our early cases is of interest in pointing out the danger of tampering with cases of definite pelvic inflammation.

The patient had a history of pelvic inflammatory disease and suffered with severe dysmenorrhea. Examination revealed thickening and tenderness in the region of the appendages. Because she was so desirous of having children the Rubin test was used. Gas passed into the abdomen, but the pressure used indicated a stenosis of the tubes. Within the next 48 hours she developed all the signs of acute pelvic inflammation. She was subsequently operated upon and the pelvic organs removed.

Insulation is indicated then in all cases of sterility not subject to the foregoing objections, as a means of following up cases in which salpingostomy has been done and as a test to prove the efficiency of operations to produce artificial sterility. The technique which we have developed in our work is a modification of the methods reported by Rubin, Furniss and Peterson. A careful history is first taken and a complete physical examination made to rule out the various contraindications to the procedure and to give us a mental picture of the pelvic structures. For the insufflation we put our patient in the lithotomy position with the hips elevated, exposing the cervix with a bivalve speculum. It is then swabbed clean and painted with iodine. A sterile Keyes Ultzman canula is attached to a three-way metal tube connected to an ordinary sphygmomanometer and an airtight syringe of 75-150 cc. capacity filled with CO-2. The canula is carefully introduced into the cervix until the rubber tip fits snugly. Rarely do we use a tenaculum, thus saving the patient additional pain. Then the vagina is flooded with boric

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acid solution. This acts as a detector of gas bubbling through the cervix past the canula, and is added after the insertion of the canula because otherwise we may carry some of the solution into the uterus. We know that the expired air is sterile unless it is contaminated by droplets from the respiratory tract. Likewise, the CO-2 is sterile unless it is contaminated by droplets of fluid. Consequently we use all precaution to inject dry CO-2 into the uterus.

The pressure is raised in the syringe slowly, from 30 to 60 seconds being required to raise it to 200. Have you ever blown into a rubber glove which has been allowed to dry unpowdered? The opposing surface becomes agglutinated and if one blows into such a glove it requires an appreciable pressure of air and a number of seconds while the agglutinated surfaces slowly unfold themselves. The anterior and posterior walls of the uterus and the folds of the tubes and the fibria are approximated and are apparently often agglutinated. Consequently slow, steady pressure is necessary to force the gas through. We have records of cases requiring 6 to 8 minutes of steady pressure before the gas penetrated into the abdominal cavity.

If the tubes are permeable the pressure, after rising to a point usually above 100 and occasionally 200—falls rapidly to about half of its highest level, where it remains stationary.

Over a year ago the authors called attention to the value of the stethoscope as an aid in determining the condition of the tubes and our subsequent experience has confirmed our original contentions. Consequently as soon as we are sure that the gas is entering the tubes, the operator listens by using a stethescope with extra long tubes which permits him to maintain the gas pressure and listen at the same time. The position of the bell of the stethescope is changed by an assistant at the direction of the operator. One listens first in the midline. If the gas bubbles back past the rubber tip of the canula it makes a shrill hissing sound audible through the stethescope, but easily ruled out by noting that bubbles are escaping through the boric acid solution. The sounds indicative of gas passing through the tubes vary from a low pitched, coarse bubbling sound to a shrill, high pitched whistle. The variation of sound depends on the caliber of the tube. In some cases the sound is quite low pitched and in these one finds that the point of minimum pressure, that is, the point to which the pressure falls after the gas begins to flow through, is low. In stenosis or partial occlusion of the tubes the point of minimum pressure is higher, varying from 100 to 150, and the sound produced by the passage of gas is higher. In other words, the tubes act as organ pipes and by the character of the sound one can determine fairly accurately whether they are stenosed or wide open.

Another point which we have demonstrated is that the point of maximum intensity of the sound is the point in the abdomen nearest the ostium of the tube. Consequently, if one tube has been removed and the other is permeable, the sound will be heard quite distinctly in the quadrant over the remaining tube and faintly or not at all in the opposite quadrant. Just as one can tell with a little experience which lung is affected with pneumonia, so one can tell whether one or both tubes are open and whether they are unobstructed or stenosed.

In nearly all of our cases where both tubes were patent we found a difference in pitch between the tubes. So we have an additional point to help in determining whether both tubes are open. This depends on the physiological fact that all of our paired organs vary in size. The kidneys, the ovaries, the limbs are all a little different in size and likewise the tubes.

As we know from the study of organ pipes, a small difference in size makes a difference in tone. Consequently we usually find a variation in the tone given off by the tubes. In most of our cases where both tubes are permeable, by listening in the midline we hear two sounds of different pitch. This observation is an aid in determining the patency of both tubes and tells us which tube is the most permeable. Of course, there are cases in which we are in doubt as to the interpretation of our stethoscopic findings. In retroversion with prolapse of the appendages the openings of both tubes may be close together, in which case there is difficulty unless there is a distinct difference in pitch. But that should not deter us from making use of this additional aid in diagnosis. The stethoscope fails the most skillful internist occasionally, but for all that he uses it constantly. We find that with practice we can become more certain of our stethoscopic results.

Further experience in this method has shown us that the subjective sensations of the patient are of value in determining the question of whether or not the tubes are patent. While the pressure is being raised the pain is just above the symphysis or sometimes as high as the navel in the midline. In obstruction there is distension pain on the obstructed side. This pain is present in both sides in case the tubes are agglutinated and open slowly under pressure.

Then we have four criteria of patency. (1) the passage of gas through the tubes; (2) the stethescopic findings; (3) the character of the pain during the insufflation; (4) the shoulder pain, which is practically always present when the patient sits up and is due to the collection of gas under the diaphram. To this may be

added a fifth, namely, fluroscopy, but since our method aims for simplicity we have purposely omitted it as superfluous in routine practice.

Let us sound a warning at this point against the indiscriminate use of high gas pressures. We know that a level of 200 mm. of mercury will open a tube if it is nearly agglutinated, consequently higher pressure is unnecessary. Pressure over 200 mm. of mercury may cause rupture of the vessels with small hemorrhage which will result in scars and adhesions. Thus we may change a case of relative to absolute sterility by careless use of this valuable method.

In a recent article by Kennedy he describes the use of Sodium Bromide injection, followed by radiography. His pictures are excellent and the additional information is valuable, particularly in relation to the location of the obstruction, but the keynote of this paper is simplicity of operation and the needed information can be determined without use of the radiograph.

Nearly all of us are agreed about the diagnostic value of pneumoperitoneum, but there is still doubt in regards to the value from the therapeutic standpoint. In that class of cases where some low grade infection has agglutinated the tubes we are able to blow them out and establish their patency. Then, provided there is no other cause of sterility, we may get pregnancy. How often this occurs it is impossible to tell. We have the records of four of our own patients who became pregnant after insufflation and in discussing the matter with my colleagues, I am able to collect almost a dozen cases in all. When one considers that, especially in clinic practice, many of our patients disappear after one or two visits, it is impossible to determine the frequency of pregnancy following this method. However, the impression prevails among those of us who are using insufflation that we have a valuable therapeutic agent.

DISCUSSION

DR. R. CRON, Ann Arbor: At Ann Arbor we have had considerable experience with the transuterine inflation, as we call it rather than insufflation. In looking over some 600 women that have been treated in this way we have found some fifty-odd who came to the clinic complaining of sterility. Those women were inflated by the transabdominal or transuterine method. Briefly, our experience has amounted to this: Out of fifty-eight-odd cases we wrote to 14 women have become pregnant. The majority became pregnant after one or two months. Some did not become pregnant after the first but after the second inflation. In those it was our feeling that the gas did not pass through the tubes the first time, since we were not able to introduce it at 200 pounds pressure nor could we hear it. The next time the gas rose to about 220 pounds pressure and, further, the patient had shoulder pain. Further, we have found that in about half of the women complaining of dysmenorrhea the dysmenorrhea has been relieved by this treatment and the relief has been more permanent than anything else we have used. In two of the women complaining of dysmenorrhea the pain was worse during the first two periods but since then they have become pregnant.

One word about the type of apparatus. It is our belief, after some experience with the syringe method, that the type of apparatus devised by Rubin is the best. A uniform, constant pressure can be maintained which is not true of the syringes and we feel that we can more accurately measure the amount of gas going in by this apparatus. Many cases have been observed when laparotomy was done and preceding this the canula was placed inside the cervix. We have found that before this there would be bleeding through the tube pushed up into the abdominal cavity. In that way we can further add a word of warning. We have never to our knowledge had any case of pelvic peritonitis result from the transuterine method. Practically all of the women have been clinical cases and we have observed the same precautions. We have had one woman with a large abdominal tumor who had some difficulty after a large inflation with gas to take a picture of the pelvic organs. Early in the work one woman complained of some difficulty, considerable shock was associated with the inflation, but the patient recovered without any serious consequences. She complained of some portal obstruction and should never have been inflated. There have been no casualties in our work.

DR. E. B. ANDERSON, Grand Rapids: I would like to ask Dr. Henderson a question about the three-way valve. The simplicity of the method appeals to me because we need something we can use in the office. If we can establish the patency of the tubes we do not need to follow up with the X-ray. I would like to have Dr. Henderson explain about the three-way valve.

DR. WARD F. SEELEY, Detroit: I have used practically the same method Dr. Henderson has outlined in the office for something over a year. We have four patients that we know definitely became pregnant after inflation who had never before been pregnant, which seems to offer some assurance of actual opening of the tubes by this method of inflation. The women who come to us for sterility as a rule are those who have tried every other possible method of becoming pregnant. They have "shopped around" everywhere. The first thing we do is to test the vaginal and cervical secretion after getting a careful history of the marital relation and so on, and then inflate the tubes if possible.

I cannot quite agree that it is always possible to hear the air pass through the tubes. We have several cases in which we have had an assistant listen, so as not to be disturbed while attempting to pass the gas at the same time, and we have been unable to hear the air pass through the tube but yet the patient has complained of the shoulder pain. I think we cannot call hearing the gas pass a definite sign. We have other methods—the shoulder pain and the pressure on the manometer, which drops back as soon as the gas goes through. I think if this method could be combined with the method outlined by Kennedy of injecting the tubes with sodium bromid and raying them it should give us an idea of what to do for patients whose tubes are closed. If the gas does not pass through to the abdominal cavity we know we have an obstruction.

The interesting point as to whether these patients can or cannot bear children depends largely upon whether the tube is closed. If we can demonstrate that the tube is closed at the proximal end, at the cornu or near it, our chances for relieving this by any operative procedures we have are not good. If

we can demonstrate by means of the sodium bromid that the obstruction is at the distal end, we have reasonable assurance that we can open the tube by salpingostomy. Until the sodium bromid is used we cannot tell where the obstruction is.

DR. GEORGE M. BROWN, Bay City: I would like to know what percentage of cases with obstruction of the tubes were relieved.

DR. HAROLD HENDERSON, Detroit, (closing): I was gratified to hear Dr. Cron report such good results with pregnancy following inflation. There is a recent article by Rongy which states that the only value of the method is that it provides a lot of gynecological apparatus. But if we are going to throw away all the things we have discovered in the last few years in regard to the treatment of sterility the problem is not worth following. We have all seen pregnancy follow the use of dilatation the curing of an endocervicitis and so on, and it would be foolish to throw away our other experiences. I think Rongy is wrong and we know that we do get pregnancies following inflation.

I was interested in the report of the relief of dysmenorrhea following this treatment, but am unable to confirm it from personal experience.

I think nobody will dispute the statement that the Rubin apparatus is the best, but it is cumbersome and likely to break so we have devised this apparatus, which is much more simple. Nothing will measure the gas any better than the simple calibrated syringe. The apparatus we use consists of the syringe measuring 75 to 150 c. c., depending upon how much gas we wish to use with the three-way outlet. The whole outfit is flexible. As you raise the pressure in the syringe you can read it in the manometer very readily. This is an apparatus which you can put in your pocket and carry around and for that reason it has an advantage over the Rubin apparatus, but again I wish to admit that the Rubin apparatus is probably the best for the routine study of these cases.

Dr. Seeley brought up the point that in some cases you do not hear any sounds with the stethoscope. I do not know whether the sound is so low that you cannot hear it but in the cases that are so open that the gas goes through without any bubbling there is practically no sound. The cases in which there is the most sound are the ones where there is the most difficulty in the gas getting through.

The sodium bromid method is one of the greatest advances in roentgenology as applied to gynecology, for by that means we can tell exactly where the obstruction lies, but we can make a good estimate of where it lies by the rather characteristic pains that the patient complains of. If the obstruction is in one tube you get a pain in the side just like an ectopic pain. If the other tube is open you get no pain. If both tubes are open there is no pain at all. I think we can estimate quite clearly where the obstruction is. In all cases that are treated for sterility we should use the sodium bromid method if it is proven that it is harmless. Kennedy reports only 20 cases and that is not enough to prove that it may not be followed by bad results.

The question was asked as to what percentage of sterility cases with obstructed tubes were relieved. We have almost 50 per cent, but it is a little bit difficult to tell about these cases. In the cases where we cannot get results the husband must be examined. In one of our cases a woman had been operated upon for sterility and when the husband was later examined not even a dead spermatozoon could be found in the semen, let alone a live one, so all angles of the sterility problem must be investigated in every case.

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A METHOD OF HOLDING THE SEPTAL MEMBRANES IN APPOSITION AFTER A SUBMUCOUS RESECTION WITHOUT THE USE OF PACKING. DESCRIPTION AND DEMONSTRATION OF THE INSTRUMENTS AND THE METHOD OF USE*

H. LEE SIMPSON, M. D.
DETROIT, MICH.

Almost every one doing rhinological surgery today, recognizes the importance of the plastic operation which has so appropriately been termed the submucous resection. For a time it was done, with slight modifications due to individual conceptions relative to its object and efficiency, very much according to the rules laid down by Killian and other early workers in this field.

The development of this work, just as is true of all intranasal surgery, was rapid after the discovery of cocaine as a local anesthetic and adrenalin as a hemostatic. With the development of methods and application it soon became evident to all that even the most radical work on the middle partition of the nose could be done without pain; but even up to the present time, packing—by various means and in various degrees of tightness—has been almost the universal method adopted to maintain the flaps firmly back to back, immediately following the operation. This, all who have had the experience will affirm, is usually an extremely disagreeable and painful experience and the great bug-bear of the operation.

Many types of packing have been employed in addition to gauze—plain and impregnated with some heavy lubricant—and many attempts have been made to utilize splints or clamps made of various materials, more often of metal, to hold the flaps in apposition and insure heal-

*Read before Section on Ophthalmology and Oto-Laryngology, Grand Rapids, September, 1923.

ing by first intention and to prevent hematomata developing between them.

The writer, himself, has made no less than six different clamps and splints designed to exert gentle pressure by setscrews and springs of one type or another. They have all been found to be cumbersome, more or less injurious to the superficial layers of the mucosa; and make an uncomfortable foreign body over the columella which accumulates blood and

PLATE I.

A—Shows grooved and forked director which guides the needle and turns the mucous membranes at it's end to an obtuse angle with the longitudinal diameter of the needle.

B—Shows No. 9 straight needle. It is oval on cross section and sharp only at the point. The needle is shown disengaged from the end of it's introducer.

clot. It makes wiping of the nose awkward and painful to the patient and is difficult and painful to remove, with results not as good and discomfort no less—and often more—than follows the use of gauze and other means of packing. It was so universally agreed that all methods so far reported in the literature caused the patient a very unpleasant experience after the operation, that it seemed a laudable ambition to seek some method which would at least mitigate and possibly entirely do away with this much dreaded post-operative experience.

About four years ago the writer one day, in a spirit of adventure, transfixed the septal mucosae with a straight surgical needle, about 1¾ inches long, oval in cross section, and sharpened on the point only. He had no intsrument designed at this time for the insertion of it so that the posterior or return transfixation was accomplished with a great deal of difficulty. He was surprised, however, that there was positively no post-operative bleeding in this case, the patient was able to breathe through his nose comfortably from the moment he left the operating chair and throughout the period of healing. He likewise suffered no post-operative discomfort, no head pains, no ear snapping and no hematoma development. He left this needle in place for four days and then removed it, also without pain or discomfort to the patient. It required

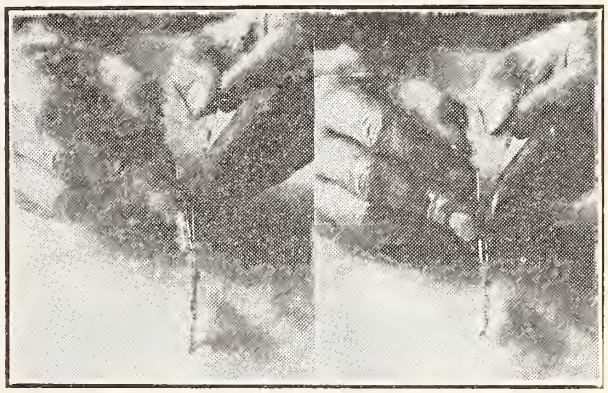

PLATE II.

Shows method of fingering the guide and the needle introducer in transfixing the membranes at the posterior passage of the needle.

the succeeding six or eight months before the instruments for placing the transfixation needle, which he proposes to demonstrate, were fully developed and since that time he has used it in practically 95 per cent of all submucous operations which he has done. He has, on two occasions, left the needle in position for 10 days following the operation, and in no instance has it caused perforation of the septum. The contrast between the experience of patients in whom he had used packing in any form or amount, and in whom he has used the transfixation method with straight needle, has been striking. The post-operative bleeding has been reduced to a conservative estimate of 10 per cent of that with packing, and to him the reason is quite clear. The reason for the absence of local facial pain and headache is, of course, easily accounted for by the fact that there is no medium causing pressure against the highly sensitive lateral nasal wall structures. He accounts for the lessened oozing by calling attention to the illustrations which have been prepared, which show that in no portion of the septum is the exchange circulation between the arterial and venous side interfered with and mechanically pressed upon. This contrasts strikingly with what prevails when the nose is

packed in any degree, but particularly if at all firmly. In this case we might liken the local situation to what happens when we open the median basilic vein at the bend of the elbow, after placing a tourniquet around the arm. In neither case do we stop the arterial inlet, but we do interfere, in varying degrees, with the venous return. Therefore in both cases there will be bleeding from any vein which has been

1. 2. 3. 4.

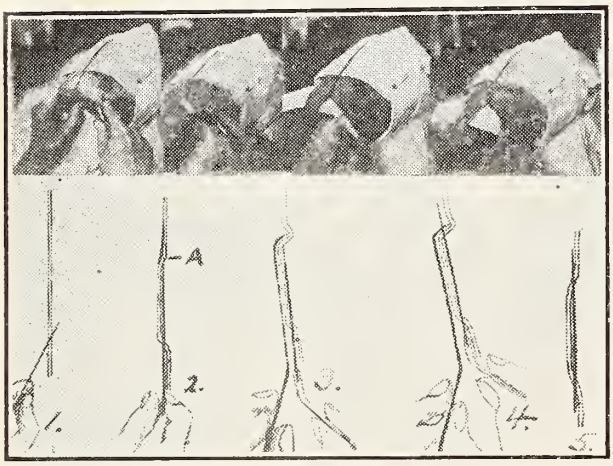

PLATE III.

Shows steps of operation of transfixing septal membranes.

No. 1 and No. 2 show part done with thumb and finger and nasal speculum. When point is slightly engaged in opposite membrane (Fig. 2-A) the needle introducer is placed over the eye end, with thumb and fingers of right hand and grooved forked director held in left hand is passed along the septum in same naris from which needle started. The turned and forked end is passed beyond the end of the needle which is distinctly felt through the mucosae, and slightly withdrawn until the angulation at the fork is engaged over the submerged point. Slight opposing lateral pressure is made between the distal ends of the director and introducer held in the two hands. The proximal or handle ends are now brought nearly to a parallel and both are gently swung over just beyond median plane of nose (Figs. 3 and 4) and the needle pushed through. This last move directs the point between the posterior segment of the resected bony septum and the middle turbinate and back along side from which it started, thus completing the transfixation. Fig. 5 shows needle in position as though observed from above.

cut—in the case of the arm with the tourniquet there will be bleeding from the phlebotomy; in the case of the packed nose there will be bleeding from any vein severed in the extent of the primary incision or where any vein has been unavoidably injured in either septal covering. The physics is the same in both cases. The writer's opinion, based upon his own experience, is that packing, in all but a very occasional situation, is not only unnecessary, but actually causes post-operative nasal bleeding.

You will ask me if the results of the use of this method are better than the results attained by packing, and I promptly answer, "no," because as I conceive it, the perfection of results of a plastic operation like that for deviation of the septum from the median plane of the nose, is almost wholly dependent upon the surgeon's conception of what he is trying to attain—in other words, the degree of perfection with which the operation itself has been performed.

No finer surgery is to be done anywhere in the human body, and no greater demand is made upon our mechano-surgical conceptions than are presented in the various deformities which we encounter in the general run of these cases. He wishes to make it clear that the surgeon should conceive of the convalescent period as longer following this operation than after almost any other operation which we have to perform. This is so because we are closely approximating two broad surfaces which form a confined space which is potentially infected and with uncertain natural drainage. The neglect of this may be and has been disastrous, owing to invasion of the interior of the skull by septic materials finding their way from between the flaps to the meninges. Therefore the careful inspection for at least two weeks following, at frequent intervals, is the invariable practice. Any evidence of retention between the flaps of infected material should be promptly examined and drained by incision at the most dependent part of its site.

In addition to the greatly reduced post-operative bleeding and the practically complete elimination of pain and discomfort following the operation, another great purpose served by its use is when we are operating in the presence of a chronic sinus suppuration. It does not cause the engorgement and oedema of the soft parts in the regions of the various sinus

IV.

Shows needle in position as though observed from above and from the side. Of course, if primary incision were made on patient's left side, the whole procedure would be reversed.

openings which the use of materials producing intranasal expanding pressure is so prone to excite. Ear complications following its use must certainly be less apt to develop because swallowing when the nose is not accluded does not cause inflation of the middle ears with the possible carrying in of infection from the nasopharynx.

The cases are invariably operated in the hospital. The patient is returned to his room in a wheel chair. He is placed in bed with a

medium back and head rest and iced compresses are applied over the nose. Codeine grains, one as a P. R. N., is ordered for any cocaine nervousness. A soft to full diet is given. He remains in the hospital for twenty-four hours.

DISCUSSION

DR. WALTER R. PARKER, Detroit, Mich.: I want to congratulate Dr. Simpson on what he has done along this line and express the hope that it will not be long before the result of his work will be in such form that we can look it over. It certainly is a field where we need some help. I think a contribution of this kind is valuable.

DR. EMIL AMBERG, Detroit, Mich.: I want to congratulate Dr. Simpson, and I want to ask him a few questions. The Doctor speaks about the lack of bleeding by his method. I am not familiar with the percentage of mortality after a septum operation, but is seems to me that if we have infection, packing off might produce or spread the infection to the lymphatics—that if there should be a space and we closed it off we might produce infection. I wish the Doctor would touch on that. Another thing, whether the bleeding might not be a good thing to carry off something that is there.

DR. WEINBERG, Lansing: I would like to ask Dr. Simpson if he has done any of these submucous operations without packing and without this method, whether he has hemorrhages or hematomas following, and whether he has had any experience with a wax splint?

DR. H. LEE SIMPSON, (closing): I have never had a fatality from a submucuous operation, and I am sure they are rare. There are some, however, as we all know. In two cases I know the death was due to infection following a submucous, but whether there was actual injury to the cribriform plate of ethmoid, I do not know. So far as I know no autopsy was made, so it will never be known. At any rate, they both died of meningitis after a few days' illness.

If I understand Dr. Amberg, you think packing might prevent infection of the higher lymphatics. I do not really know whether that would happen, but we do know that clinically our hemorrhages develop after the packing is withdrawn. It seems to me the best reason for omitting packing is that the hemotoma takes place after you have removed it, and you do not have to take the packing out if you do not put it in. It is a most disagreeable thing to have it removed, and if it is not placed it need not be removed.

With this needle there is no pain. I grasp it with a small forceps, put traction on it, and it comes out very easily, after 72 hours. Patients are surprised that it has been there.

Dr. Weinberg asked if I had had experience with a wax splint. I have not, but I think it is a splendid thing to do—better than packing. Next to my method I think it is the best.

There is something to be said for packing, however. Suppose we have done a resection and we wish to correct it by packing and cannot do any other way, we may pack in a way that will not interfere with the exchange between the arterial and venous side, if we will over-correct it by putting tampons high on this side and low on that side.

The idea of this needle is to do away with interference in the exchange between the arterial and venous sides.

DRY CLINIC

Section on Ophthalmology Oto-Laryngology

CASE REPORT—EPITHELIOMA

D. EMMETT WELSH, M. D., F. A. C. S.
GRAND RAPIDS, MICH.

Mr. Todd, age 73 years, occupation laborer, consulted me on October 4, 1922, on acount of failing vision in the left eye.

On examination I found a growth extending from 9 to 3 o'clock on the corneal area completely covering the lower half of the cornea and extending in to the conjunctiva a distance of about one-half inch on the nasal side and from there in the conjunctiva from 9 to 3 o'clock on the temporal side. It was grayish white in appearance, slightly elevated on the nasal side and gradually tapering to a thin film down to the temporal side. It was adherent to the cornea, but the conjunctiva and cornea were not deeply involved. Small vessels covered this surface, particularly on the nasal side. There was no pain or any inconvenience from the same. A section was taken with the following findings:

Microscopical examination of a small specimen of tissue removed from the conjunctiva at the corneal-scleral junction revealed a tissue structure—an epithelioma, squamous cell type.

On the day following the examination I removed the mass at the hospital and began the use of the Shehan Thermophore. The growth was removed under cocaine and adrenalin anesthesia. The same anesthesia was used in using the thermophore. This was applied at intervals of four or five days for 30 days. The mass disappeared leaving a slight corneal opacity. About 30 days after the last application of the thermophore I noticed there were some new growths taking place and re-application of the thermophore was made. This was in January of this year. I did not see the case again until April when there was some renewal of the growth. I again used the thermophore twice at intervals of four or five days.

On account of this mass covering the pulpilary area, the patient had light and form perception. Today he has with proper correction two-thirds vision for distance and normal reading distance. The results you can observe. At no time did he suffer any pain or any inconvenience from the use of the thermophore or from the growth itself. He had noticed this developing for about three months.

In regard to these epithelioma growths, I have seen four other cases which I removed, cauterizing their bases with carbolic acid. Recurrence took place in two cases, and after an interval of 60 days I again removed them in the same manner. Recurrence again took place and I enucliated the eye. In one case the patient died six months later from involvement of the liver due to metastasis, while in the other case two years elapsed before metastasis occurred and liver involvement had taken place. The other two cases I have seen at times varying from three to five years after removal and have now lost all knowledge of them since that time.

TRAUMATIC CATARACT

ALFRED DEAN, M. D.
GRAND RAPIDS, MICH.

Mr. Chairman, members and guests of the Section. The case I am presenting this morning has a less frequent etiology than formerly, produced an interest-

ing pathology and ran an interesting but uncertain course during the first three weeks.

HISTORY

R. W., age 17, with other boys on the night of July 3, was shooting firecrackers of the flash-bang type, (two inches in length) one delayed in exploding, the patient stooped over to investigate and it exploded, part striking him in the left eye toward the nasal side. Temporarily blinded and experiencing some pain, he was taken to a physician in the neighborhood, who, failing to find any distinct injury of the eye, prescribed a soothing preparation to prevent inflammation. The patient participated in the activities on the 4th and on the 5th he read the sports column and did not experience any great inconvenience until awakening from a nap in the afternoon, the eye was then painful and inflamed, and in spite of home treatment it continued to grow worse, and was brought to my office on the morning of the 6th.

EXAMINATION

The patient was suffering considerable pain, slight photo phobia and lachrymation. The lids of the left eye were red and swollen with a small area of ecchymosis on lower towards the nasal side, but none on the eyeball which was uniformly injected. The pupil and iris were hidden by a dense triangular shaped hemorrhage, which, with the exceptions of a very slight area at the limbus on nasal side above and below, entirely filled the anterior chamber. The eyeball seemed somewhat more prominent than the right and on palpation somewhat harder; movement was not restricted and motion did not increase the pain in and about it. Vision light and shadow perception. Right eye normal.

TREATMENT

The acident having occurred 60 hours previous and not being able to judge the extent of the injury because of the hemmorrhage, I sought measures to relieve the pain. This I found in atropin, dionin, and hot compresses. An hour after the patient reached home the pain in the eye ceased and has since remained comfortable. The following morning he reported at the office with the external appearance of the eye much the same as of the previous. The intraoculal tension, however, manifestly increased to palpation, and with the McLean tonometer recorded an intraocular tension of 73, the following morning it was 71, but as the eye was comfortable I continued the same treatment and the next morning I was encouraged to find the eyeball less injected and softer, a tension of 36. It increased to 42 the following day and since has fluctuated between 35 and 37 with the exception of one reading of 26. It was five days before the blood in the anterior chamber showed a change of level with a change of position but thereafter showed progressive signs of absorption, by the tenth day it occupied the lower half of the anterior chamber; yet with perfect atropinization, the iris fully dilated, it was impossible to view the interior with the ophthalmoscope and not until the end of the third week was I able to obtain even a hazy view of the retinal vessels. The lens then showed cataractous change, cloudiness of the central and a much more dense area in lower and nasal sectors, but a great amount of which has since cleared away. Gradually as the absorption took place, vision improved.

The anterior chamber still showed the presence of blood on July 26, but I took chances on stopping the atropin and made several instillations of one-half per cent eserin solution to note its action on the iris, which was dilated and out of sight, and noted that when it contracted the pupil was slightly pear shaped with point toward the nasal side. Dionin, 4 per cent and hot compresses T. I. D., was continued for several weeks longer. The vision on August 14 was 20/200—, increased to 20/50+ by a —1.25 sp. +0.25 cyl. × 90, on the 24th it was 20/50? increased to 20/30+ by —0.87 sp. +0.37 cyl. × 180, on September first it was 20/40+ increased to 20/20? by —0.75 sp. +0.50 cyl. × 165. The central vision is still somewhat disturbed but he can readily decipher 30 inch type.

CONCLUSIONS

The eye injury in this case was not considered to be of a serious nature by the physician who first saw it, yet I feel confident at that time there must have been signs of irido-dialysis, injury to lens and capsule, also to ciliary body, and hemorrhage present in anterior and posterior chamber. The glaucomatous condition was brought on by obstruction of drainage due to the extensive hemorrhage, the swelling of the lens and injured parts. The quick closure of the rent in the lens capsule and the complete dilatation of the iris before any plastic change in it had taken place, helped to reduce the introcular pressure by opening the angle for drainage. The limited extent of the cataract is due to the early healing of the injured capsule. The pear shaped pupil to the healing of the iridal rupture, and the improvement in vision to the absorption of the hemorrhage and the deposits in the lens.

CHRONIC GLAUCOMA

DR. OLIVER PRESENTING FOR DR. BEEMAN

GRAND RAPIDS, MICH.

Mr. M. J., optician, began having trouble with vision in May, 1914. One evening while looking at a light he noticed a halo of rainbow colors around it. Each day his vision became more foggy as though looking through steam. Some of the letters would disappear from words in signs at a distance. A lighted match would have a rainbow ring around the flame. He began to have a feeling of pressure with some sensations of aching in the bones around the right eye. At that time he had been wearing for 10 years a correction of plus three fifty sphere each eye for both distance and reading. About two weeks following his first symptoms of eye trouble he had his eyes examined and at that time vision was right 20/200, left 20/100 corrected to right 20/50+3+75×90, left 20/30+350 sph. There was cupping of the disks; a diagnosis of glaucoma was made and a solution of pilocarpin and eserin prescribed to be used in each eye.

He was not seen again until July, 1923 (nine years, four months later) and the history for the intervening time was that after having used the drops for about a week the vision had steadily failed to only central in the right eye and the left was clear except a little cloudy or shaded in the upper part of the field. He then went to Milwaukee and an iridectomy was made on the right eye about June 1, 1914. The halo of rainbow colors disappeared, the vision remained the same without any improvement except that two or three times a day it would become very dim and in about an hour improve to its former state which condition exists at the present time in both eyes.

About four years after the operation on the right eye an iridectomy was made on the left. This was done at St. Luke's Hospital in Chicago. He recovered readily but without any improvement to his vision and he says that the left eye always feels as though there was a little pressure about it.

For the passed two months he says his field of

vision has become more contracted and the vision more hazy or smoky. At present the tension by theMcLean tonometer is R. 45, L. 70. He depends on his left eye for distance wearing R. plus 2, L. plano. He depends on his right eye for reading, using a plus 8 lens.

CASE REPORT

E. T. WORDEN, M. D.

ADRIAN, MICH.

C. P., male, aged 16 years, first came to the office June 23, 1920, suffering from a right maxillary sinusitis and polypoid degeneration of the right middle turbinate. At this time the anterior portion of the middle turbinate was removed and the bulla ethmoidalis broken down. A few treatments with lavage of the nares and application of argyrol packs apparently completed a cure.

In April, 1922, two years later, he was given attention at the Ann Arbor clinic, where they evidently performed an ethmoid exenteration after removing several polypi and made an opening through the lateral wall in the inferior meatus to the antrum.

On April 9, 1923, he again presented himself and complained that nasal respiration was impossible. The anterior nares on the right side was completely filled with a large polypi and the nasopharynx was completely filled with what proved to be an antrochoanal polypus which did not extend below the margin of the soft palate.

After removal of the large polyp from the anterior nares, a synechia was found to have formed by the inferior turbinate with the septum anteriorly and extending an inch backward. Another synechia was found to have been formed by the adherence of a remnant of the middle turbinate to the septum.

Transillumination and radiographic examination of the right maxillary sinus was negative.

After division of the synechiae, effort was put forth for three or four weeks to prevent the synechiae from forming again, to allay the swelling and inflammation of the tissues, and to reduce the amount of pus that seemed to emanate from the middle meatus. This was accomplished by the gentle application of cocaine and adrenalin, followed by the instillation of a 10 per cent argyrol solution. After using the cocaine and adrenalin solution, the patient was made to lie on his back with his head projecting beyond the end of the couch and so flexed backward that the dorsum of the nose was in a perpendicular position with the nostrils uppermost. From 30 to 60 minims of argyrol solution was allowed then to trickle slowly into the nares and the patient maintained his position for a half hour. At no time was lavage resorted to, the detritus being removed by suction through an improvised, hard rubber, eustachian catheter.

On May 6, 1923, the antro-choanal polyp was found to be smaller and the nares more roomy except for a spur anteriorly which was removed submucously by a motor-propelled saw. It was now evident that the antro-choanal polyp had its origin from the inferior meatus, though at this time it was impossible to demonstrate an opening in the lateral wall. Patient reported a profuse discharge of pus throughout the day and the cocaine-adrenalin-argyrol treatment was continued three weeks longer before attempt was made to remove the choanal polyp.

TECHNIQUE OF OPERATION

1st Step: The naso-pharynx and right nares were anesthetized as thoroughly as possible with cocaine—10 per cent solution—and adrenalin. A large, braided, silk thread was threaded into a Bellocques nasal cannula which was passed along the floor of the nares under the polyp and projected below the margin of the soft palate where the thread was seized and drawn out through the mouth.

2nd Step: A three-eighths inch rubber tube was threaded its entire length with a No. 7 snare wire, one end of which was looped upon itself. A Carrel-Dakin punch was used to punch holes three-eighths of an inch from the end of the tube corresponding to the looped end of the wire. This end of the tube was now introduced through the attic of the right nares, up over the polyp and seized as it presented itself on the posterior wall of the pharynx and drawn out through the mouth.

Note: The thread is under the polyp and the tube over it, one end of each protruding from the right nares and the other from the mouth.

3rd Step: The end of the thread issuing from the mouth was then threaded through the hole in one side of the tube, through the loop in the wire, on through the opposite hole in the tube, and then tied with a slip knot.

4th Step: Traction was then made on the end of the tube protruding from the anterior nares until the distal end was just visible below the margin of the soft palate, when traction was made upon the thread protruding from the anterior nares and continued till the threaded end of the rubber tube was delivered from the floor of the nares.

Note: The wire-threaded tube surrounded the polyp and by inspection and palpation was found to thoroughly engage the polyp.

5th Step: The thread was then disengaged from the tube and wire, and another piece of the snare wire was spliced onto the looped end of the wire in the tube. Traction was made on the wire until the splice was drawn a little way up into the tube.

6th Step: Traction was then made upon the tube issuing from the attic of the nares until the entire tube was withdrawn, thus leaving the second wire entirely surrounding the polyp.

7th Step: The wire was then threaded into the snare and the polyp snared off.

The polyp immediately dropped to the pharynx and the patient involuntarily ejected it. The patient was not caused the slightest pain nor was there, literally, one drop of blood lost until an hour or so later when there was only a little bleeding. The polyp weighed three and a half drams. Bi-lateral nasal respiration was immediately restored.

A few days later, several small polypi were removed from the inferior meatus and then the artificial opening into the antrum was discovered. The opening was thoroughly curetted and the antrum irrigated, after which a 20 per cent solution of argyrol was injected into the antrum.

Later a third synechia was discovered between the septum and the so-called superior turbinate. This was divided and several small polypi removed from the region of the posterior ethmoid cells. The choanal polyp was removed May 7 and the cocaine-adrenalin-argyrol treatment continued intermittently until August 11, when the patient was discharged. However, he was advised to present himself for inspection monthly for a period of two years or whenever an acute rhinitis attack intervened.

COMMENT

While choanal polypi are not rare, they are by no means of common occurrence, and some unusual features of the case presented brought about the decision to report it.

In the report of 80 cases that have been published

within the last 10 years, there was no mention that the choanal polypus was other than solitary, while in this case, polypi were numerous. In the 80 cases I was able to collect, 70 were antrochoanal polypi with their pedicles issuing from the middle meatus and presumably from an accessory ostium, four were spheno-choanal polypi, and six were of undetermined origin, but probably springing from the ethmoid. The case herewith presented was unusual in that the pedicle issued from an artificial opening in the antrum in the inferior meatus.

Another unusual feature was the difficulties encountered because of the acquired and natural obstructions, to-wit: the septal spur and extensive synechia. In planning a method of attack, search was made through all text-books and current medical literature available with the result that three methods were found to be recommended: radical operation through canine fossa, extraction by way of the naso-pharynx and mouth with adenoid or other forceps, and by snaring through the anterior nares. In many text-books, description of the operation was limited and was about as follows: "The polyp is removed with the snare." To snare the polyp in this case by the ordinary method seemed hopeless for obvious reasons, and to perform the radical operation in the light of negative findings in the antrum seemed unwarranted. Therefore the technique above described was devised. While it appears complicated, it is quite simple and very easily carried out, requires only a local anesthetic, and is painless and bloodless.

As described in the above report, the polyp completely filled the naso-pharynx though it did not extend down below the plane of the hard palate. It was about the size of a small hen's egg; its shape conformed somewhat to the limits of the cavity and seemed to consist of two lateral lobes, in appearance not unlike that of the medulla oblongata. It appeared pearly-grey and upon palpation was found to be very firm and fibrous. The pedicle was not discerned, probably because it was short and thick. The reason for thinking that is sprung from the inferior meatus was because it was demonstrated not to have sprung from the middle or superior meatus, nor from the sphenoid ostium.

In the issue of June 3, 1922, of the Lancet, G. W. Dawson reported the case "of an exceptionally large antro-choanal polypus, weighing nine and one-half drachms, occurring in a man 47 years of age, who was content to endure its presence for several years." It was so large that "its limits could only be seen with difficulty by strongly depressing the tongue, when it could be seen to reach close to the entrance of the larynx." The pedicle was long and easily traced to the orifice in the antrum.

In reviewing other case reports, the observation was made that where the history showed that the condition had existed over a period of several years, the polypi naturally attained an immense size, and the weight of the growth tended to stretch and lengthen the pedicle and thereby render the search for its origin much more easy. Inasmuch as the case herewith reported showed by its history that the condition had only existed for the period of about one year, this would explain the short, thick pedicle and the difficulty experienced in locating its origin. This also probably explains why six reporters could not locate the origin of the polypi in the cases they reported.

It is the belief of the writer that much of the radical surgery performed in these cases is prematurely resorted to and is unwarranted. In the review of the 80 cases above mentioned, it was noted that, where histological investigations were made, the polypi sprung from the muco-periostium of the median wall of the antrum or from the floor of the autrum immediately adjacent to the median wall. As in the case herewith reported, the pedicle seemed to have its origin around the orifice in the antrum and it was possible to eradicate all diseased tissue intra-nasally. Now, should it be subsequently demonstrated that other polypi are forming in the antrum, indicative of an extension or exacerbation of undiscovered disease, the radical operation should be performed. However, it would seem that the great majority of cases could be cured by conservative surgery because of the accessibility of the seat of origin in the lateral wall. Several reporters attacked the antrum through the canine fossa for their primary method of removal of the polypus. In one such instance, Mr. Tilley, of London, voiced his sentiments in the following manner: "It is a pity to do anything in the first instance in the nature of a radical operation for the removal of these growths . . . . to enter the canine fossa of a young patient means destroying some of the dental nerves, and so setting up conditions disadvantageous to the patient's after career." It would seem, then, that the patient's interests would best be conserved by, first, removal of the growth through the anterior or posterior nares, and, second, an attempt to eradicate all diseased tissue at the seat of origin of the pedicle, through the lateral wall intranasally, leaving the radical operation as a last resort.

SIMPLE METHOD OF VACCINATION

FRANK R. STARKEY, M. D.

DETROIT, MICH.

Because of rather wide-spread incidence of small-pox in and about Detroit this winter, I have been advising all of my patients to submit to vaccination. Many of the cases are so mild that they cause little or no inconvenience to the patient and escape diagnosis. They attend theatres, churches and social functions, thus spreading infection. I have devised a safe, simple and rapid method which I believe removes all of the objections that could be reasonably brought against vaccination. These objections have been; first, pain; second, danger of extraneous infection; third, disfiguring scar; fourth, disagreeable systemic effect; fifth, discomfort of local sore. All of these objections are met and overcome by the method I am now using which is as follows: first, wash the site with denatured alcohol or paint lightly with iodine; second, introduce vaccine into deep layers of skin by means of a sterile all glass syringe with 27 gauge needle. This requires but a very small amount of time, is almost entirely painless, leaves the skin unbroken except for the single minute puncture and lessens the danger of extraneous infection to the smallest minimum, and is 100 per cent positive. It is followed in 24 hours by a local zone of erythema and edema about two inches in diameter, slight malaise and rise in temperature to about 100. There is some tenderness but no induration or scarring. The entire local phenomena disappear in from seven to 10 days. No dressing is required.

Mid-Winter Meeting of the Council

OFFICIAL MINUTES

Pursuant to official notice and call, The Council of the Michigan State Medical Society met in Detroit on January 16th and 17th, 1924. The meeting was called to order at 6:30 p. m. in the Wayne County Medical Society building, by Chairman J. B. Jackson with the following Councillors, Officers and Invitees present:

Councillors Jackson, Walker, Burke, Baird, Bruce, Corbus, Ricker, Greene, Darling, Randall, Clancy and LeFevre.

Officers: President Guy L. Connor, Secretary-Editor F. C. Warnshuis, Chairman Medico-Legal Committee, F. B. Tibbals; Speaker Carl Moll, Vice-Speaker J. E. King, A. M. A. Delegates A. W. Hornbogen, G. H. Frothingham and J. D. Brook; Chairman of Legislative Committee, Hugh Stewart; Secretary Wolfson of the Macomb County Medical Society; Frank Kelly, President of the Wayne County Medical Society.

Ex-Presidents: B. D. Harison, W. H. Sawyer, Angus McLean, A. P. Biddle, Guy L. Kiefer and W. T. Dodge.

At the conclusion of the dinner, to which those present had been invited as the guests of President Connor, the Secretary-Editor delivered his annual report as follows:

ANNUAL REPORT OF THE SECRETARY-EDITOR 1923

To the Council,
Michigan State Medical Society,
Gentlemen:

TRANSMISSION

I have the honor to submit to you, and through you to the members, this, my Annual Report as Secretary-Editor for the year 1923, closing December 31, 1923.

AUDITOR'S REPORT

In compliance with an established precedent, there is referred to you the following financial report prepared by Ernst and Ernst, bonded auditors, upon completion of their Annual Audit of the books of the Society and our finances.

January 10, 1924.

To the Council of the Michigan State Medical Society,

Dr. F. C. Warnshuis, Secretary,
Grand Rapids, Mich.

Gentlemen:—In accordance with your request, we have audited the books of account and record of the MICHIGAN STATE MEDICAL SOCIETY for the year ended December 31, 1923, and submit herewith our report.

The following summary compares the results from the financial operations of the Society for the year under audit with those for the preceding year:

JOURNAL INCOME

	Year Ended Dec. 31, 1923 Amount	Per Cent	Year Ended Dec. 31, 1922 Amount	Per Cent
Subscriptions, reprints, advertising, etc.	$13,111.87	100.00%	$12,663.43	100.00%
Less: Journal and reprint expense	12,104.91	92.32	12,240.04	96.65
Profit on Journal Publication	$ 1,006.96	7.68%	$ 423.39	3.35%

DUES AND OTHER INCOME

Membership dues, etc.	$ 3,081.99	100.00%	$ 3,019.52	100.00%
Less: Annual meeting, society expense, etc.	3,821.12	123.98	3,441.11	114.29
Excess of society expense, overdues, etc.	$ 739.13	23.98%	$ 421.59	14.29%
Net income	$ 267.83		$ 1.80	

Attention is directed to the increase in the percentage of profit from the publication of the Journal over that for the year ended December 31, 1922.

A Statement of the Assets and Liabilities of the Society at December 31, 1923, is included elsewhere in this report, subject to the following comments:

Cash on deposit with the Old National Bank, Grand Rapids, Mich., was verified by correspondence. All recorded cash receipts for the year were traced direct to the bank deposits as shown by the bank statements. We supported all recorded cash disbursements by examination of cancelled bank checks, invoices, or other data on file.

We inspected the securities owned, consisting of bonds of the Citizens Telephone Company, Grand Rapids, Mich., and of the Government of the Dutch East Indies.

As far as we could ascertain, full provision has been made for all known liabilities of the Society at December 31, 1923.

We HEREBY CERTIFY that we have audited the books of account and record of the Michigan State Medical Society for the year ended December 31, 1923, as kept by the Secretary-Editor, Dr. F. C. Warnshuis, and that, in our opinion, based upon the records examined and information obtained by us, the accompanying Statement of Assets and Liabilities is drawn up so as to set

forth the correct financial position of the Society at December 31, 1923, and that the relative operating statement is correct.

Very truly yours,

ERNST & ERNST.

(SEAL)

STATEMENT OF ASSETS AND LIABILITIES
MICHIGAN STATE MEDICAL SOCIETY
December 31, 1923

ASSETS

Cash—		
On deposit with Old National Bank		$ 129.77
Accounts Receivable—		
Due from Subscribers, Advertisers, Etc.		726.07
Securities Owned—		
Bonds of Citizens Telephone Company (5%)	$2,000.00	
Bonds of Dutch East Indies (5½%)	1,000.00	3,000.00
		$3,855.84

LIABILITIES

Advances for Reprints			$ 234.75
Due to Defense Fund			87.50
Net Worth—			
Balance—January 1, 1923	$3,152.75		
Advances to Legislative Committee repaid by County Societies	113.00	$3,265.76	
Add: Net Profit for year ended December 31, 1923		267.83	3,533.59
			$3,855.84

INCOME AND EXPENSE
MICHIGAN STATE MEDICAL SOCIETY
(For the Year Ended December 31, 1923)

INCOME

Journal Subscriptions and Sales	$ 5,782.95	
Advertising Sales	5,244.49	
Reprint Sales	1,353.18	
Membership Dues	2,842.25	
Professional Announcement Sales	731.25	
Interest Received	239.74	$16,193.86

EXPENSE

Journal Expense	$10,748.38	
Society Expense	2,869.16	
Reprint Expense	1,356.53	
Council Expense	210.92	
Expense of Delegates to A. M. A.	339.10	
Annual Meeting	401.94	15,926.03
NET INCOME		$ 267.83

COMMENTS ON FINANCES

Following the instructions of the Council, our financial receipts are governed as follows:

All the receipts are always in the form of checks or drafts and are derived from membership dues, advertising and interest earnings. These are deposited to the account of the Society in the Old National Bank, Grand Rapids.

Disbursements are made upon a voucher check signed by the Chairman of the Council, the Treasurer and the Secretary. No funds, other than current rountine expenses, are disbursed except by appropriation by the Council.

The investments of the Society are held by the Treasurer.

Having no cash receipts and no cash disbursements, it will be perceived that our incoming and outgoing funds are always subject to record and entry and at the close of each official year it is accurately possible to audit our finances and make an accounting of our funds to the last penny.

Our gain of $267.83 in resources, in view of our experiences and financial tribulations for the past five years, is viewed with considerable satisfaction. On the other hand it has been apparent for several years that as far as organizational achievement is concerned we cannot progress, we cannot assume new activities and attain greater ends unless new or additional revenue is provided. Mere figures will be quoted at this time and later, under comments, certain conclusions will be presented.

By Constitutional provision our annual dues are Five Dolars per year. By action of the Council these dues are appropriated as follows:

Two Dollars to Medical Defense; Two Dollars to Journal Subscription; One Dollar to Society Expense. The following exhibit is thus created:

JOURNAL

Advertising Receipts	$ 5,975.64	
Subscription Receipts	5,782.95	
Total Receipts	$11,758.59	
Total Cost of Journal	$10,748.38	
Gain for Journal	$ 1,010.21	

SOCIETY

Membership Dues	$ 2,842.24	
Other Earnings	239.74	
	$ 3,081.99	$3,081.99

EXPENDITURES

Society Expense	$ 2,869.16	
Annual Meeting	401.94	
Council Expense	210.92	
Delegates to A. M. A. (two)	339.10	
Total Expenditures	$ 3,821.12	$3,821.12
Net Loss		$ 739.13

In plain words, the Society is expending annually more than it receives. This loss has been absorbed by the Journal.

The query is pertinent: Is this a sound financial policy and is it fair to limit our Journal by causing it to assume the financial deficit of the Society? Attention has been directed to this situation in several of my annual reports but no solution has been adopted.

It is within the scope of the power of the Council to recommend to the House of Delegates whether or not our Annual Dues are to be increased. If such a recommendation is made, it would seem that it would then be advisable to prepare a definite budget indicating the purposes for which additional funds are to be expended and the benefits that will be derived by the individual member. An exhibit setting forth the dues collected by other State Societies would also be enlightening and would serve to indicate

wherein our Society fails to remain fully abreast of organizational progress.

I am of the opinion that our financial problems should be the subject of a careful study with the view of formulating a definite report and recommendation to be incorporated in the Council's Annual Report to the House of Delegates.

Further comment on our finances will be considered in this report under the heading of Society Work and The Journal.

As a summary it is pointed out that last year our net profit was $1.80 in comparison with this year's profit of $267.83.

SOCIETY

On January 1, 1922 our total number of members in good standing was 2,827. We close the year with a membership of 2,900, a gain of 73 members.

For your information I submit the following comparative membership list, given by Counties:

County Society	1922	1923	Loss	Gain	Delinquent
Alpena	12	15	....	3	2
Antrim, Charlevoix, Emmett	12	8	4	....	5
Barry	16	17	....	1	2
Bay	63	64	....	1	2
Benzie	8	0	8	....	8
Berrien	36	30	6	....	6
Branch	14	16	....	2	1
Calhoun	94	97	....	3	2
Cass	7	6	1	....	0
Cheboygan	0	2	....	2	0
Chippewa	20	19	1	....	5
Clinton	15	15	0	0	2
Delta	22	24	....	2	0
Dickinson, Iron	13	5	8	....	8
Eaton	11	18	....	7	1
Genesee	114	105	9	....	11
Gogebic	21	20	1	....	2
Grand Traverse, Leelanau	21	20	1	....	3
Gratiot, Isabella, Clare	35	32	3	....	5
Hillsdale	19	32	....	3	1
Houghton	39	39	0	0	1
Huron	4	9	....	5	0
Ingham	79	78	1	....	8
Ionia	17	14	3	....	7
Jackson	65	55	10	....	9
Kalamazoo, Allegan, Van Buren	117	117	0	0	0
Kent	174	171	3	....	10
Lapeer	10	19	....	9	2
Lenawee	27	22	5	....	8
Macomb	30	21	9	....	9
Manistee	8	12	....	4	2
Marquette, Alger	36	35	1	....	4
Mecosta	18	16	2	....	3
Menominee	9	8	1	....	3
Midland	6	6	0	0	0
Monroe	27	25	2	....	0
Montcalm	16	15	1	....	1
Muskegon	53	55	....	2	4
Newaygo	10	8	3	....	3
Oakland	46	48	....	2	7
Oceana	9	7	2	....	2
O. M. C. O. R. O.	10	8	2	....	2
Ontonagon	8	8	0	0	1
Ottawa	34	32	2	....	3
Saginaw	43	66	....	23	0
Presque Isle	0	1	....	1	0
Sanilac	16	15	1	....	3
Schoolcraft	7	6	1	....	1
Shiawassee	27	28	....	1	5
St. Clair	49	51	....	2	2
St. Joseph	4	15	....	11	2
Tri	20	19	1	....	6
Tuscola	26	18	8	....	2
Washtenaw	104	107	....	3	15
Wayne	1,126	1,202	....	76	46
	2,827	2,900	97	170	238

In considering these tabulated figures one's attention is arrested by the following exhibits:

First, we have the largest paid membership in the history of the Society.

Second, 22 Societies report a gain of 170 members.

Third, 28 Societies report a loss of 97 members. In but six counties this loss exceeds eight members, the highest being Jackson with a loss of 10 members.

Fourth, while still recorded as members, but in suspension, we have a total of 238 delinquents and therefore a gross membership of 3,138.

On the whole, our numerical strength is very satisfactory. It is but proper to refer with commendation to Wayne, Saginaw, Eaton, St. Joseph, Lapeer and Huron Counties for their appreciable percentages of gain in membership.

DEATHS

During the year death removed from our records the following members:

George C. Bassett	W. S. Shipp
Oscar G. Cowley	Guy M. Canfield
John R. Jones	A. E. Rooneville
J. A. Belanger	Frederick Edmister
P. H. Gunsallus	Ezra R. Larned
James E. Peltier	H. M. Leach
Leland S. Weaver	Ernest Schorr
C. J. Larson	H. J. Stephens
W. E. Burtless	Horace B. Williams
William Richardson	W. C. Marsh
Justin E. Emerson	L. G. Parkhurst
John McClurg	Charles E. Kyner
S. A. Snow	James Purdon
J. A. King	——Vickers

While from time to time these deaths have been recorded in the Journal, we pause at this time to once more pay final tribute and respect. We recognize that each in his own sphere, his own field of activity contributed a full measure of useful deeds that served to reflect dedicated lives devoted to the well being of their fellow men and to the general welfare of society. As coworkers we mourn their death and record the esteem in which they were held.

SOCIETY CHANGES

On recommendation of the Councillors of the Districts involved, Ionia and Montcalm Counties were amalgamated and transferred to the Fifth Councilor District. It is recommended that the Council confirm this change and authorize the issuance of a charter to the Ionia-Montcalm Society.

ANNUAL MEETING

The House of Delegates chose Mount Clemens as the place for the holding of our 1924 Annual Meeting. It devolves upon the Council at this session to designate the

actual time for the holding of our Annual Session.

REFERENCE REPORT

The House of Delegates referred to the Council the report of the Advisory Committee to the State Commission of Health and at the last session of the Council, consideration of this report was postponed until this meeting.

LANTERNS

By virtue of instructions received, five stereopticon lanterns for use of Sections were purchased this year. These lanterns are in the custody of your Secretary.

COMPONENT UNITS ACTIVITY

It is the desire of your Secretary to record and pay tribute to the officers of our County Societies. Much that has been accomplished is due wholly and solely to these officers and to whom we owe most of our organizational prestige. Contributing a large amount of his time, expending appreciable effort ,zealous in the discharge of their duties, they have splendidly accepted and acquitted themselves of their responsibilities. It is proper therefore that recognition be given to them and to record our obligations and appreciation for their loyal cooperation.

CONSTITUTION AND BY-LAWS

The House of Delegates created a special committee that is to revise our Constitution and By-Laws and report at our next Annual Meeting. This committee is desirous of receiving suggestions from our members and will welcome the proffering of recommendations. Dr. J. G. R. Manwaring of Flint is Chairman of this Special Committee.

ORGANIZATIONAL PROBLEMS

The changes that are being wrought in all avenues of society, business and government cannot occur without their exercising a definite influence upon the relationships of practitioners of medicine to society as a whole. As time change so must we too, as physicians and as an organization, change with them. Were we not to adapt ourselves to and accept these changes, the days would be short ere we would be excluded from the the pale of our composite social fabric. It is these changes and processes of evolution that ever creat for us new organizational problems. By the agency of these events, old landmarks and courses are fast disappearing. Experience is robbed of half its value. New difficulties obstruct our paths, new burdens weigh us down, while new and more serious problems press for solution. Our individual relationship to patients and the public is rapidly passing through a transitional stage, with the changes that shall ever mark an era in our professional history. We stand as actors upon the stage and as we appear in the scenes, we are confronted with a duty that calls upon us to strive honestly and earnestly to understand the philosophy of these events, to recognize the weaknesses of our organization and to adapt our efforts so that we may render a faithful and sincere accounting of our stewardship. Individual aspirations, coterie schemations and quest for selfish profit, must not, dare not, be permitted to subsidize or warp our purposes or cause us to wantonly cast aside the objects that we acknowledge as the basis of our organization. The welfare of the whole profession of Michigan and not of individuals must motivate those to whom has been intrusted the covenants and leadership of our Society. For 12 years I have been distinctly honored in being privileged to serve as Secretary of our Society. In addition, as a Delegate to the A. M. A. I have been fortunate in obtaining contact with a noble, self-sacrificing, conscientious group of medical men who have but one concern—the welfare of the profession and the acceptance of a trust that has been delegated to them by their fellow physicians. It is further my great and highly appreciated privilege and honor to have served during two sessions as Speaker of the House of Delegates of the A. M. A. and to have been rechosen for that office at the last session.

In these relationships I have ever, and the records are clear, been inspired and imbued with but one thought—the acquiring of that information, the study of all organizational problems, the expenditure of that time and effort, and the assumption of a just attitude to questions as they arise as would best enable me to render service that had but one motive and end—not self, not cliques, not groups, not fanatics—but—and in letters large and bold—the best interests of our organizations, national, state, county and of our members, not as individuals, but collectively. Though wrongly accused at times, though frequently maligned, though creating enemies, I have firmly and steadfastly declined to be a party to any scheme or movement that implied or sought to subsidize or betray the high motives and purposes of recognized medical organizations or those who were honestly performing the duties conferred upon them as officers. Such base and attempted criticisms have given me no personal concern for I am possessed of the self-satisfaction of knowing that they eminate only from those who could not em-

ploy me to join in with them to further their personal and selfish designs.

I purposely make this statement at this time not with the object of attempting to record justification but to announce that the following recommendations are based upon the grounds of the experience that has been mine, the personal observations that have been made, and the thought devoted to reach a satisfactory solution of that which we as a Society must seek to attain in the coming years.

It would be a superfluous and too voluminous to set forth or even brief the pertinent criticisms that are advanced and which bear upon our relationship to society, government and health problems. He who has striven to investigate is familiar with their context. There are, however, problems that stand out, which at this time arrest our attention and command consideration. They are :

1. A pressing need for the adoption and institution of a plan that will enable our Society to institute educational facilities that will be available to the majority of our members. Post-graduate instruction, readily obtainable and within easy accessibility is imperative and an obligation to provide such instruction rests with our State Society.

2. We as a profession must undertake the duty and task of educating the public in regard to the scientific truths of medicine. In addition we must also educate the public so effectively that the individual will recognize that many of his disabilities may be prevented if he but utilizes that information that is ours in regard to prevention of disability and disease, and, utilizing that information individual health and logevity will be enhanced.

3. Legislative activity that will acquaint and enlighten legislative bodies as to the enactment of just laws, consistent with proven, ascertainable facts, that will forestall the creating of a widespread dependency in matters of individual and community health. Such dependency, born from the misguided and short-sighted viewpoints of enthusiastic groups of lay social workers is threatening with immediate pendency and unless promptly arrested will create a situation that promises to wipe out the independence of our homes and rob our firesides of their sacred boundaries.

I am firm in the conviction that upon this Council and upon the officers of our Society there now rests these imperative undertakings that press for prompt acceptance. Mindful of this task that confronts us, thoughtfully considering all that the years have taught us, sincerely desirous of meeting the demands of the situation and with full consideration of the interests of our members, I am submitting for your consideration, amendment and institution the following plans:

First: (a) That our state be divided into definite districts, due consideration being given to geographical and population factors, so as to constitute logical groupings of doctors who may be centrally convened with a minimum amount of loss of time and individual discomfort.

(b) Create, by Constitutional provision, an Educational Council of our Society composed of 10 members representing our Society, our two medical colleges and our State Department of Health.

(c) Charge this Educational Council with the duty of providing and conducting in each district of the state, on two or more occasions each year, and of from three to six days duration, Post-graduate Courses and Educational Medical Clinics for the doctors in the district. These courses of instructions and clinics to be conducted by trained and competent teachers who will be remunerated by the Council on Education for the services they thus render.

(d) Create by assessment, contribution and endowment an Educational Fund, so that the earnings of this fund will defray the expenses of this plan of Post-graduate education.

Again would I tax your patience and set forth a voluminous brief were I to engage in the presentation of all the facts that bear upon this plan and the arguments that establish the need for our Society to promptly undertake this feature of organizational work. Let it suffice that this recommendation is further confirmed by medical men of national reputation, medical Educators and medical and lay individuals with whom I have been privileged to discuss the problem in its several details.

Second: The second recommendation has been initiated in a limited degree. A foundation for our activity has been well established by the Joint Committee on Public Health Education. It is apparent, however, that a greater subscription of support is requisite on the part of our County Societies and members. Therefore, it is urged that the Council take definite action that will bring about a movement that will extend to every County Society and which will witness the holding of at least from 6 to 10 such public meetings each year.

As a further means of public education, we are failing, if we do not undertake a

definite campaign that will send into the majority of our Michigan homes for individual reading, Hygeia. This monthly magazine is a most valuable, educational missionary. It is our duty to bring about the greatest possible distribution in this state.

Third: The need for legislative education becomes vividly apparent when one reviews the experiences and achievements of our sister societies of Texas, California, Iowa, New York, Ohio and Pennsylvania. We in Michigan have fallen into the boggs of politics in our quest to secure legislative enactments and while certain ends have been achieved, our foundations rest upon unstable grounds. It is time that we reconstructed this feature of our Society work. It is incumbent upon this Council to bring about the institution of a new plan of legisiative activity.

These, gentlemen, are our Society problems of the hour. The manner in which they are met will determine for future years, yea, future generations whether we recognize and recognizing meet up to our responsibilities that passing events endow us with. Whether we will write in the pages of the medical history of Michigan that we acquitted ourselves of the trust imposed.

THE JOURNAL

In the financial statements rendered it will be noted that The Journal closed the year with a profit of $1,010.21. The advertising receipts were $5,975.74, a gain of $89.46. Considering the advertising policies of business firms during the past year we were indeed fortunate in maintaining such an advertising revenue. Our prediction a year ago that The Journal had weathered the financial vicissitudes of the printing world was well founded. During the past five years we have passed through an unprecendented period of business uncertainties. We have maintained an established policy and today we are emerging from the difficulties that encompassed us without sacrificing any of The Journal's valued features.

Upon instruction from the Council, imparted at the September meeting, a contract was entered into for the publication of the Journal which will enable us to issue a larger Journal at lessened cost. This contract expires October 1, 1924, and has many advantageous features.

Our editorial policy is formulated by the Publication Committee. Our editorials and editorial comments are governed by that policy. Fundamentally we assume that the foremost objects that are sought to be obtained by The Journal are:

1. A medium for publication of the scientific papers, scientific studies and clinical observations of our members.
2. Publication of Organizational Acitivity.
3. Publication of news items and events.
4. Editorials imparting information as to scientific progress, discussion of medical economics and advancements of facts and information in order to formulate and mould sound policies and united expressions of desirable attitudes upon the medical topics of the day.
5. To impart the Society's stand and relationship as regards the profession's contact and concern with the public questions.

With this platform ever in view, we have sought to cause The Journal to reflect the Society and not an individual. We have when circumstances compelled, opposed the individual or minority group, for the sole purpose of conserving the rights and interests of the majority. I am of the opinion that such must ever be the editorial policy of The Journal—the interests, the welfare of the whole and not of the minor or individual part.

During the past year we were specifically directed to oppose a certain legislative proposal. In doing so, a small group of members took offense and sought to discredit your Editor because he complied with the explicit instructions of the Council. This caused us no personal concern. It is commented upon for the purpose of pointing out that in the endeavor to attain that which events and experience indicates to be the best for the whole Society, we will invariably, no matter what the question may be, antagonize and oppose the personal desires and aspirations of a few. It is ever thus.

The Journal editorially cannot assume a straddling or neutral position upon medical problems and practices. It must assume a definite position and stand. That position must represent the mature, deliberate judgment of the majority of our members. Having assumed that position, it is consistent and essential that it be fully and fearlessly defended. To ever be neutral, to assume an evasive policy, to cowardly refrain from exposing pernicious and individual or collective, selfish activity that affects our Society, abrogates our rights, robs us of our independence, or discredits us before the public, would be to issue a Journal that would be puerile and of but small value or interest. Our members have a right to expect and receive authoritative information upon all medical, economic problems and likewise they are entitled to detailed facts in regard to all proposed or established medical activities.

In the pursuit of such a policy we will at times, and regretfully, tread upon the toes of individuals. Unpleasant as such a necessity may be, can we do otherwise? We hasten to add that such necessities amongst ourselves would be few and far between, did proponents of movements come forth, openly and frankly, and give expression to a willingness to discuss their proposals and plans with our organization, the Council and our officers, and to seek and receive mutual co-operation and advice. This must be recognized as a desirable attitude and one that should be sought for with avidity.

Personally, as Editor, I have never caused the assumption of a definite position upon any subject without first seeking the advice and instructions of the Publication Committee.

It is hoped that this detailed explanation will be received, as intended—not as a statement of justification, but rather as information for your guidance.

One cannot, unless daily familiar with the numerous details involved, appreciate the work entailed in editorial direction.

Each issue is of limited space. We seek to publish submitted articles as promptly as possible. We are ever confronted with an increasing number of articles awaiting publication and delays, vexious though they are to authors, cannot be avoided. If it is your judgment, and we request expression thereon, we believe that the Journal is entitled to expend all of its earnings in bringing about prompter publication of these articles by the issuance of a large publication each month. Shall we continue to cause the Journal to liquidate the deficits of the Society? Your instruction is requested.

CONCLUSION

In concluding this, my twelfth Annual Report, no combination of words that I may endeavor to formulate can adequately and fully set forth my appreciation of the trust imposed in permitting me to serve our Society and our profession in the capacity of Secretary-Editor. I am profoundly grateful.

Frederick C. Warnshuis,
Secretary-Editor.

TREASURER'S REPORT

The Treasurer, D. Emmett Welsh, submitted his report as follows:

To the Council of the
Michigan State Medical Society:

The following will convey to you the amount of funds of the Michigan State Medical Society in my hands for the year ending December 31st, 1923:

Citizens Telephone Company 5% Bonds Numbers 139, 140—$1,000.00 each	$2,000.00
Dutch East Indies 5½% Bonds, 30-year External Sinking Fund Number 8,254	1,000.00
	$3,000.00

The following will convey to you the amount of funds on hand in the Defense Fund of the Michigan State Medical Society for the year ending December 31st, 1923:

U. S. Liberty Loan Bond, Number A-0015756, Second Issue Converted 4½%	$ 500.00
Holland St. Louis Bond 8%, Number M-757	1,000.00
Balance on hand in checking account, Peoples State Bank, Detroit, Michigan	3,668.43
TOTAL	$5,168.43

Respectfully submitted,
D. Emmett Welsh, M. D.
Treasurer.

Frank B. Tibbals, Chairman of the Medico-Legal Committee, rendered the following report:

MEDICO-LEGAL COMMITTEE REPORT

Detroit, Mich., January 2, 1924.

To the Council,
Michigan State Medical Society.

Gentlemen:—In submitting this, its fourteenth annual report, the Executive Board of the Medico-Legal Committee point with pride to the fact that with but one exception the individual members of this board have given fourteen years of service to the Michigan State Medical Society. During this time we have seen the calls upon this committee increase year by year until during 1923 thirty-nine cases of alleged malpractice were reported to us. For many years the percentage of one threat to every one hundred members of the Michigan State Medical Society remained uniform, but for the past few years this percentage has been decidedly increased.

The prophylactic value of this work, however, is strong enough in many counties so that there is no marked increase in trial cases. During 1923, for instance, we defended in court only eight cases, of which only one resulted in an adverse verdict, while five were won outright, and two were settled for comparatively small sums during the progress of the trial. The one case in which the jury gave an adverse verdict had been previously tried three times and is now in appeal to the supreme court .

Our defense at trial is stronger, we believe, than that of any insurance company because of the fact that we are usually able to straighten out local professional differences and present a pretty solid front to the enemy. We have repeatedly made the statement that the hungry lawyer and the jealous doctor are the two main causes of malpractice suits. The second of these two factors is in considerable measure under our control, and in those counties where the profession has grasped the axiomatic fact that the first duty of every society member is to his profession we have little trouble. In some counties of this state no malpractice case has reached trial in the last fourteen years. In other counties the court

dockets are seldom free of a malpractice case against some doctor . Certain counties are really plague spots and in these counties this committee has already spent more than the individual members will contribute to the Medico-Legal Fund in the next twenty-five years. While we do not care to publicly state which counties these are, the profession in these counties know, and we respectfully suggest to them the advisability of getting together and putting a stop to this menace in their own communities We cannot admit that there exists any necessity for doctors to quarrel, and we do know that wherever general harmony prevails malpractice suits are rare. We would suggest to a few of these counties a program devoted to the discussion of malpractice suits, and the chairman of this committee would like nothing better than to visit a few of these county societies, on invitation, and devote an evening to discussion of this very important matter.

In one respect only does this committee admit its failure, viz.: a lessening of the number of malpractice suits. There are, to be sure, other factors now operative besides the hungry lawyer and the jealous doctor. These factors are the unrest of the times, and the compensation act, which protects the employer against suit, but does not protect the attending physician. The scope of our work has always been much broader than that of the insurance company, for our position has always been that we were obligated to defend a member against any charge arising out of the practice of medicine. In accordance with this fact, we have this year agreed to defend one libel case and one case based on the alienation of affections. The libel case arose during the successful attempt of the Tuscola County Medical Society to expel a member proven guilty of framing up a malpractice suit; and on suggestion of the Councillor of this district the Council authorized sending our general attorney to the trial of this libel case, should it reach trial. The alienation case is a direct attack upon the professional and moral reputation of a well known physician, and is exactly the same kind of a charge which could be made with probably just as much basis of truth against any practicing physician. On the approval of the president of the Michigan State Medical Society, this committee has agreed to defend this case, should it ever reach trial, which is considered doubtful.

Our bank balance at the close of 1923 is $3,668.43, which, with our Sinking Fund, makes us strong enough financially to furnish a fighting defense in all cases reported to us.

Respectfully submitted.

Frank Burr Tibbals,
E. C. Taylor,
Frank B. Walker.

Chairman Jackson referred these several reports to the Committees of the Council for consideration and report at the next session Jan. 17, 1924, at 9 a. m.

DISCUSSION

A general discussion was then engaged in in regard to organizational work and activity and was participated in by President Connor, Frank Kelly, President of the Wayne County Society; Ex-Presidents Harison, Biddle, Sawyer, Keifer, McLean, Hornbogen and Dodge. Speaker Moll, Doctors Stewart and Brook.

Each Councillor present was called upon and reported upon the condition and activities of the societies in their district. Chairman Jackson spoke upon the duties of Councillors and also called attention to the work of the Joint Committee on Public Health Education, Hygeia, and Fellowship affiliation with the A. M. A.

The first session was adjourned at 11:30 p. m.

SECOND SESSION

The second session of the Council Meeting was called to order by Chairman Jackson, in the Statler Hotel, Detroit, at 9 a. m., January 17, 1924, with the following present: Jackson, Darling, Ricker, Corbus, Bruce, Burke, LeFevre, Greene, Clancy, Walker, Randall, Baird, President Connor, Secretary-Editor F. C. Warnshuis and Ex-President Dodge.

REPORT OF FINANCE COMMITTEE

Councillor LeFevre, Chairman of the Finance Committee, submitted the following report:

1. We have examined the reports of the Secretary-Editor, Treasurer and the Auditors' report and in our judgment they are correct and represent the financial condition of the Society.

2. We recommend that a budget system, as recommended by the Secretary, be adopted and instituted.

3. In view of the necessary expenses of the Society, the need for the providing of medical clinics, the expenses of the annual meetings, committee expenses, etc., we recommend that an increase in dues be made in amount sufficient to the program of organizational activity that is under consideration.

C. D. Darling,
G. L. LeFevre
Greene,
Finance Committtee.

On motion of Councillor Clancy, supported by Councillor Baird, it was moved that the report of the Committee be adopted and that the Council recommend to the next session of the House of Delegates that the resolution now before the House of Delegates to increase the annual dues to $7.00 per year is endorsed and urged by the Council. Carried.

COUNTY SOCIETY WORK COMMITTEE

Councillor C. C. Clancy, Chairman of the Committee on County Society Work, submitted the following report:

1. It is recommended that the Council record its expression of approval and appreciation of the work of the Special Advisory Committee to the State Department of Health. That the committee be directed to continue its activity to bring about a greater degree of co-operation between the State Society and the State Department of Health. That the Council recommends that the Advisory Council, as suggested in the report of the Committee to the House of Delegates, be not formulated in view of the fact that such an organization is already in existence as represented by the Joint Committee on Public Health Education.

2. The committee recommends that County Societies be aided in every possible way in promoting and holding group clinics and county meetings as frequently as possible for the benefit of our members, and it is urged that Councillors take such steps as necessary to inspire the holding of post-graduate clinics.

3. Your Committee recommends that the Council give freely of its aid to the Medico-Legal Committee and that the Councillors be urged to help and further the work of the committee in their districts.

4. Your Committee recommends that the President of the Society be requested to appoint a committee of five to outline and plan a method whereby the recommendation of the Secretary as to Regional Post-Graduate Clinics may be instituted. Such committee to report at the next annual meeting.

5. Your Committee recommends that County Societies be urged to take an active part in the making of local health surveys and by their activity dominate this type of health work.

6. Your Committee recommends that to induce a larger number of graduate physicians to serve in rural districts that the Deans of our Medical Colleges be urged to invite older practitioners to give addresses before their senior medical classes, setting forth the value and benefit to be derived from such rural practice where the doctor is dependent upon his ability and resources. That this responsibility is a splendid training and desirable rounding out of a medical education. We urge that the graduate physician be impressed with the need of the experience of a general practice before engaging in a specialty. We decry the presumption of young graduates to immediately limit their work without having had the experience of a general practice and warn the public of this dangerous tendency. The public must be served and the would-be specialist needs a broad general training and experience as a safe foundation to future limitation of practice in the several medical specialties.

C. C. Clancy,
H. E. Randall,
O. L. Ricker.

This report was considered, paragraph by paragraph, and the following action taken:

1. Clancy-Randall moved the adoption of paragraph one. Carried.
2. Randall-Ricker moved the adoption of paragraph two. Carried.
3. LeFevre-Bruce moved adoption of paragraph three. Carried.
4. LeFevre-Ricker moved adoption of paragraph four. Carried.
5. Bruce-LeFevre moved adoption of paragraph five. Carried.
6. Baird-Ricker moved adoption of paragraph six. Carried.

Councillors Clancy-Randall moved the adoption of the report as a whole. Carried.

REPORT OF THE PUBLICATION COMMITTEE

Councillor Corbus presented the following report of the Publication Committee:

1. That the earnings of the Journal be expended for the purposes of issuing a larger Journal and that the Journal earnings be not used to defray the expenses of the Society.

2. That each Councillor be requested to urge the appointment by County Societies of correspondents who shall supply the editor with news items and reports of society activity.

3. That the Publication Committee be authorized to make available from one to four pages of reading space in each issue and that the State Department of Health be requested to utilize this space for dissemination of information to the profession upon health matters. The Publication Committee to exercise its right of censorship of copy submitted.

The Committee recommends the adoption of these recommendations.

B. R. Corbus,
J. D. Bruce.

On motion of Councillors Ricker and Burke the report of the Publication Committtee was adopted.

On motion of Councillors Corbus and Clancy the issuance of a charter to the newly amalgamated Ionia-Montcalm County Society was authorized and the society transferred to the Fifth district.

ANNUAL MEETING

On motion of Councillors LeFevre-Randall September was designated as the month for the holding of our next annual meeting. The chairman was authorized to designate the exact dates after conference with the officers of

the Macomb County Medical Society. Carried.

SECRETARIES' CONFERENCE

Moved by Councillors Ricker and Burke that the chairman of the Council appoint a committee to arrange for the holding of a conference of County Secretaries in Kalamazoo in April in conjunction with the meeting of the Joint Committee on Public Health Education. Carried.

Moved by Councillors Greene and Corbus that the Council go on record as being heartily in sympathy with the work that is being done by the Joint Committee on Public Health Education and that the Councillors be advised to make every effort to obtain the co-operation and support of County Societies to assist the Joint Committee in furthering its plans. Carried.

ELECTION

Councillor Corbus placed F. C. Warnshuis of Grand Rapids, in nomination for re-election as Secretary-Editor for the ensuing year. Supported by Councillor Walker.

Moved by Councillor Bruce, supported by several, that the nominations be closed and the Chairman instructed to cast the unanimous ballot of the Council for Dr. Warnshuis. Carried. The Chairman did so cast and declared the election of F. C. Warnshuis as Secretary-Editor for the ensuing year.

Moved by Councillor Ricker, supported by Councillor Burke that the Secretary be instructed to cast the unanimous ballot of the Council for D. Emmett Welsh as Treasurer for the ensuing year. Carried. The Secretary did so cast and the Chairman declared Dr. Welsh elected as Treasurer for the ensuing year.

Moved by Councillor Bruce, supported by Councillor LeFevre, that the Honorarium of $100 be paid to the Treasurer. Carried.

MEDICO-LEGAL COMMITTEE APPOINTMENTS

President Connor announced that he had appointed E. C. Taylor, Angus McLean and W. J. Stapelton to membership on the Medico-Legal Committee. The Chairman directed that the announcement of these appointments be entered upon the records of the Council.

Moved by Councillor Randall and supported by Councillor Baird that the Secretary's recommendation in regard to legislative policies be called to the attention of the Committee on Revision of the Constitution and By-Laws with the recommendation of the Council that provision be made for a Legislative Council of five members who shall have a rotating tenure of office of five years. Carried.

The Secretary stated that for a number of years neither the Secretary or the Treasurer had been under bond to the Society. He recommended that as a matter of business that these bonds should be executed. On motion of Councillor Randall, supported by Councillor Corbus, the Secretary was directed to cause the securance of such bonds. Carried.

The Secretary directed attention to the fact that under the Compensation Act, the Society could be held liable for any accident that might occur to its employees. Upon motion of Councillor Randall, supported by Councillor Darling, the Secretary was instructed to secure compensation insurance to cover the employees of the Society. Carried.

On motion of Councillor Bruce, supported by Councillor LeFevre, the Secretary was authorized to deputize the Treasurer to sign vouchers in the name of the Secretary. Carried.

There being no other business, on motion of Councillor Greene, the Council adjourned at 1:45 p. m.

J. B. Jackson,
Chairman.

F. C. Warnshuis,
Secretary.

THE USE OF BENZYL BENZOATE IN THE TREATMENT OF ANGINA PECTORIS

The first use of benzyl benzoate in Heberden's angina is credited by Robert H. Babcock, Chicago (Journal A. M. A., Jan. 19, 1924), to Dr. Bayard Holmes, Jr., who stumbled on to its ability to relieve this formidable affection through prescribing it for renal colic. In 1919, since that time, Holmes and Babcock have prescribed the remedy in approximately 20 instances ow hat seemed to be typical attacks of angina pectoris. In five of these cases decided relief of the pain followed the more or less continuous use of the drug. Prolonged use of this remedy over many months has not apparently been attended by unpleasant or harmful effects, and only rarely has a patient complained of stomach disturbance. It is always prescribed in milk or cream, and generally in 30 drop doses four times daily. The remedy is not believed capable of correcting the pathologic condition responsible for the distress. It is strictly palliative and not curative. Nor is it believed that it will ward off the fatal catastrophe which terminates more or less suddenly practically all cases of organic or true angina or true angina pectoris. In some cases, very slight, if any, amelioration of pain has resulted, notably in a case of syphilitic aortitis with free regurgitation. In instances of hypertension, no invariable or sustained reduction of blood pressure has been observed. In no instance have harmful effects been detected. The remedy would appear to prove efficacious in cases in which vascular tension or spasm produces such a degree of intra-aortic pressure as to pinch the sensory nerve endings richly supplied to the aortic coats, in accordance with Allbutt's explanation of organic angina pectoris.

The Journal
OF THE
Michigan State Medical Society
ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

PUBLICATION COMMITTEE
R. C. Stone, Chairman.....Battle Creek
B. R. Corbus.....Grand Rapids
J. D. Bruce.....Saginaw

Editor and Business Manager
FREDERICK C. WARNSHUIS, M. D., D. Sc., F. A. C. S.
Grand Rapids, Mich.

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The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

Subscription Price—$5 per year, in advance

FEBRUARY, 1924.

Report Malpractice Threats Immediately to Doctor F. B. Tibbals, 1212 Kresge Building, Detroit, Mich.

Editorials

HERNIA

That a hernia should be repaired by closure is generally accepted. That all hernias should be operated upon, regardless, is a pernicious dictum. To assert that an operation for the cure of a hernia is a safe, simple, always effective proceedure is to falsely state true experiences.

Experienced surgeons, careful technic, and post-operation supervision does not assure one hundred per cent success. Evidence is at hand that in selected cases, operated on by skilled men, a failure of from 2 to 4 per cent will be encountered in a series of several hundred cases. The fact is that some other surgeon, not the man who performed the operation, sees more of our failures and we of his; and so we are not always conversant with our failure percentage.

The death rate following hernia operations varies from 0.5 to 0.9 per cent. The causes of death being mostly pulmonary complications, emboli or acute kidney disease.

Not all cases of hernia should be operated. The small direct hernia which rarely strangulates, rarely becomes very large and only in certain instances gives discomfort presents no pressing need for operation. The larger direct hernias, with obesity, small, flabid conjoined tendon, relaxed wall, will result in failure in about 20 per cent of cases. The same is true in certain oblique hernias. Be careful about promising a result, especially if evidence points to poorly developed conjoined tendon. Successful repair of these types may be very difficult. A partial success is sometimes worse than the original condition.

Syphilis, alcoholism, nephritis, heart lesions, respiratory lesions, diabetes, the very young and very aged, all present conditions that may bring about failures. Careful examination, careful weighing of existing symptoms must be given to them before a recommendation for operation is made. One dare not ignore these factors that frequently foster a failure.

Lastly, do not always blame your failures to the breaking of a stitch, vomiting or post-operative gas distention. Your failures are due chiefly to poorly selected cases whose muscles and tendons will not permit a firm, radical repair and to poor technic. The latter is preventable. The former can be prevented if you exercise discriminating judgment.

DIPHTHERIA

In spite of our knowledge of diphtheria and our possession of a potent, practically specific antitoxin, the death rate from diphtheria is growing larger. Fatal results are ensuing that may and can be prevented. The present situation demands that we as physicians must assume an aggressive attitude and undertake, by education of the people and by our plan of treatment to promptly bring about a betterment of present conditions and a decided lowering of the present death rate.

The education of the public consists of again impressing them with the fact that neglect of any sore throat invites a fatality. That all children of school age should be given a Shick test and if positive, receive toxin-anti-toxin. Urge parents to have this preventive measure employed in their children. Induce editors, teachers and civic authorities to impart this information. So much for publicity and education.

Now, what should be our plan of treatment. If blame rests upon doctors, it involves chiefly our method of treatment. Secondly, because we are careless or hurried and do not consider every acute throat a potential case of diphtheria.

The diagnosis is usually easy—though at times an atypical clinical picture will be encountered. In general it may be stated that to wait for a clinching of the diagnosis by a re-

port of a positive culture is procrastination. We go so far as to say that if the clinical suspicion of diphtheria is established, do not wait for a culture but administer a full dose of anti-toxin. You do no harm and very often such prompt exhibition of anti-toxin turns a promising severe case into a mild one.

In the administration of anti-toxin there is but one rule as to dosage and that is large doses. In the light of clinical experience and scientific knowledge the following recommendation of Dr. W. H. Park, of New York City is a safe, effective guide.

	Mild	Early Mod.	Late Mod. or Early Severe	Severe and Malign't
Infant 10-30 lbs. under 2 years	2,000 to 3,000	3,000 to 5,000	5,000 to 10,000	7,500 to 10,000
30-90 lbs. under 15 years	3,000 to 4,000	4,000 to 10,000	10,000 to 15,000	10,000 to 20,000
Adults	3,000 to 4,000	5,000 to 10,000	10,000 to 20,000	20,000 to 50,000
	Intramuscular		Intravenous	

One need not fear these doses—they are safe and effective, whereas smaller doses are of but minor value. Likewise it is well to remember that the intramuscular administration of anti-toxin does not produce its greatest effect until 48 hours after injection, while when given intravenously immediate effect is obtained. Intravenous administration should be resorted to when on your first visit you encounter a severe or malignant infection.

You, as a physician, will be blameless if you are alert and if you early exhibit full doses of anti-toxin in all suspicious sore throats.

STATE MILITARY COMMITTEE

The following letter is self explanatory:

November 19, 1923.

The Secretary,
Medical Society, State of Michigan,
Grand Rapids, Michigan.

My Dear Doctor:

In order to properly meet the responsibilities of the medical profession of America in the program for national defense it is necessary to accomplish the enrollment of all eligible men of the profession in the Medical Section of the Officers' Reserve Corps.

I am sure it is obvious to you and the members of the Society of which you are a member that the organization of an adequate medical reserve contemplates and requires the support and encouragement of all members of the profession.

The advantage of enrollment and classification in time of peace of the body of the profession are conspicuous and include an avoidance of a repetition of the majority of the mequalities and defects which developed as a result of our state of unpreparedness for the World War.

It is the desire of the War Department to organize and develop the Reserve Corps so as to provide recognition by promotion in grade and assignment to function in organizations in time of peace which will entail the minimum imposition of hardships on men called to active duty in emergency and will insure military efficiency.

In order that a better understanding of Reserve Corps affairs may be developed in medical societies it is proposed that a military committee be appointed in each Society.

The purpose of this committee will be:

(a) To establish and maintain contact with the War Department through the Surgeon General.

(b) To promote the organization of the Reserve Corps by procurement of enrollments therein.

(c) To receive information from the War Department in connection with the Reserve Corps and to convey the same to the Society.

(d) To convey the recommendations of the Society for the improvement of the organization and training of Reserve Officers.

In brief to establish an agency for the development of a more intimate association between the members of the profession and the War Department.

The organization of the Medical Sections of the Reserve Corps is an outstanding obligation of my office and sincere proper organization of the medical men of the country for its defense program is a problem which concerns and I am sure interests each member of your Society. I am asking a continuance of your support and suggest if appropriate that the proposed liaison be effected.

It is requested that this matter be brought to the attention of your Society and if it is considered appropriate to organize a military committee that this be done and the names of the committee be furnished me.

Very truly yours,
M. W. Ireland,
Surgeon General.

In compliance with the above, President Connor has appointed the following committee:

Angus McLean, Detroit, Chairman.
Ray Connor, Detroit.
P. M. Hickey, Ann Arbor.
H. M. Malejan, Detroit.
F. C. Warnshuis, Grand Rapids.

The Surgeon-General was so advised and the following reply received:

November 30, 1923.

Lt. Col. Frederick C. Warnshuis, Med-ORC,
Secretary-Editor, Michigan State Medical Society,
Powers Theatre Building,
Grand Rapids, Michigan.

My Dear Colonel Warnshuis:

I am directed by the Surgeon General to acknowledge receipt of your communication of November 26th announcing the appointment of a Military Committee of the Michigan State Medical Society.

The Surgeon General desires that I express to you his appreciation of your prompt action in this matter. It is not the intention of the office to impose any involuntary irksome task on the members of the committee but will endeavor to convey information to your Society through the committee, of progress made in the organization of the Medical Section of the Officers' Reserve Corps. It is hoped that the committee may find it possible to promote the organization of the Reserve by stimulating former officers and recent graduates to secure appointment in the Reserve Corps.

The Surgeon General feels that perfection in peace time organization of the Medical Sections cannot be attained without the full support of the entire medical profession. It is obvious to you that a proper and complete organization cannot be perpetuated without the interest and support of members of the profession as soon as they become eligible by graduation in medicine. The Surgeon General desires that I emphasize the fact that enrollment in the Reserve makes possible classification according to specialty and assignment to unit in accordance with that knowledge. If this can be done in time of peace, very considerable progress will be made towards the development of adequate organization. It is not intended to impose involuntary training in time of peace or any irksome task on members of the profession appointed in the Medical Sections.

For your information, I am inclosing monographs on the Reserve Corps. Should your Committee find it appropriate to procure appointment in the Reserve Corps, we shall be glad to furnish you application blanks and instructions as to the procedure in applying for appointment.

It is hoped that your Society will call upon this office for any information necessary to promote the operation of the Reserve Corps. We shall communicate to you from time to time such information as may be of value to the members of your Society.

Very truly yours,

G. I. Jones,

Major, Medical Corps.

MID-WINTER MEETING OF THE COUNCIL

The report of the mid-winter meeting of the Council will be found in this issue. Incorporated in these minutes there will be found the annual reports of the Secretary-Editor, Treasurer and Chairman of the Medico-Legal Committee. In addition, there is imparted the action taken by the Council in regard to the organizational problems and administration of our Society.

It is urged that every member read these reports and minutes. Further, it would be extremely desirable and valuable if the President or Secretary of the County Societies would cause these reports and the action taken to be read at the very next meeting of your County Society. It is the desire of each Councillor that this organizational information be imparted to every member.

Our members are urged to become intimately conversant with the affairs of their organization and to understand the details of administrative activities.

It may be safely asserted that this two-day session of the Council witnessed a wholesome contribution of Councillor thought and decision that was imbued with but one thought, and which sought to attain but one end—the welfare and best interests of our Society. Each member of the Council exhibited an eager desire to familiarize himself with his duties and to acquit himself of the responsibility that rests upon him. This is further apparent when one reviews the different actions that were taken.

It cannot be said that the Council and the officers are not alert to the welfare of the organization. It is true, however, that a goodly proportion of our members know very little regarding Society problems, or the difficulties encountered in the work that is being done. They are urged to acquire a clearer insight and to study these reports and then to subscribe their active, intelligent support. Read these minutes now.

In subsequent issues we will impart further and more extended comments upon the official proceedings. Let it suffice for the present that the important and paramount object is to familiarize yourself with these reports.

Editorial Comments

While the minutes of the mid-winter meeting of the Council reveal the official action taken, it must not be presumed that the conclusions reached were attained automatically. The Council devoted much thought and discussion to each subject. Opinions were freely expressed and the welfare of the Society and its composite membership was always of first consideration together with the interests and needs of the public. The Councillors were fully alive to their responsibilities and gave repeated demonstrations of their zeal and earnestness. They likewise expressed their intentions of subscribing their personal efforts toward attaining the ends that are being sought. Political expediency received no consideration.

It now remains for our County Societies and individual members to support and aid the Council and the Officers of the Society to attain the objects sought and to successfully carry out the plans that were approved. As an individual member, we urge that you contribute a goodly amount of effort, time and interest to aid in the work. The Council, the President and your Officers cannot carry on alone and secure the results that are desired. You must aid and aid constantly. Please do not shirk your duty. Read these reports and minutes and having become familiar with the work, intelligently lend your assistance and support. Hold-backs are out of style.

The Joint Committee on Public Health Education held a meeting in Detroit on January 16 which was attended by the members of the Council. You should be familiar with the work of this committee and you should join with the Officers of your County Society and cause several of the public meetings to be held during the coming months in your community. If this is done you will personally profit and find heartier support being subscribed to your professional work by the people amongst whom you live. One must indeed be stupid and of narrow vision if he does not perceive the immense value of the Public Health Education Movement that is being developed by this committee. Join with your Councillor in putting across this work and in interesting the public in your district.

It was a happy idea that inspired President Connor to invite the Ex-Presidents of the Society to join him and be present at the dinner given to the Council.

The informal talks and timely recommendations made by these Ex-Presidents were appreciated by the members of the Council.

Discussion of a paper is not an opportunity for the uttering of idle platitudes or the proffering of bouquets. Discussions are not to be construed as personal attacks upon the author. Discussions are not be used to reflect personal enmity or petty bickerings. Discussions are solely for the purpose of revealing personal, clinical experiences and observations and to give emphasis to pertinent points of the paper. Different view points and opinions do not imply attack or enmity. We are induced to impart these reflections because of a seeming tendency of discussants to fail to put some real "pep" in their remarks and because those holding opposite opinions draw in unto themselves and remain silent. Please start some real discussions at your next meeting.

By action of the Board of Trustees of the A. M. A., the annual Fellowship and Subscription rates have been reduced to $5.00. If you permitted January to pass without your making application for Fellowship affiliation, do not permit February to pass before sending in your application. The A. M. A. merits your support and you need the Journal of the A. M. A.—so send in your application.

A fine automobile, elaborate waiting rooms, specially equipped examining and consultation rooms, a full assortment of instruments and diagnostic paraphernalia do not always indicate a capable, efficient, well trained doctor. After all is said, it is the man himself and not his purchased outfit that determines the successful, reliable doctor. To become a "man yourself" means work, study, conscientious application and attendance as well as participation in the activities of your County Medical Society. Your ability lies in you and not in your equipment—they are but a means.

From the first physician down, individuals and groups have sought to put the medical profession on the shelf. They haven't succeeded and never will succeed. At times they may get one foot on the arena stage but they are never destined to reach the center or star position. All you have to do, Doctor, is to render conscientious, efficient service.

Someone has well said that what we need today are more sweat glands and less monkey glands. And we add—the sweat glands should not be ornamental but active and fully functionating.

The following, extracted from the Ohio State Journal, reflects a viewpoint accepted and respected by well thinking physicians and health officials. How much more commendable than that of the official who asserts: "I'll have all you doctors working for the state, city or county before I get through with my political plans and schemes."

"The importance of health officials securing the co-operation of the physicians in any public health program has been emphasized numerous times in recent years.

"This same subject came up at every session of the Ohio health commissioners during the fourth annual meeting, recently held in Columbus. It was emphasized by speakers from within and without the state. Each insisted that public health officials must secure the private practitioner's co-operation.

"Quite naturally in the promotion of public health the physician and the public health official must understand each other and assist each other in bringing about the desired results.

"Special functions and fields of activities differ for the public health official and the private practitioner, yet their objects and aims are largely the same. Each is pledged and duty bound to promote positive health for all members of society and to relieve the more unfortunate persons of disease and suffering. The health official is chiefly concerned with community sanitation and hygiene measures with a view of the gradual elimination of disease and sickness; the physician is interested in and assists in the community work and at the same time is chiefly concerned with the individual needs of patients. The physician's main preventive work comes through corrective measures for private patients; the public health official, in community sanitation and hygiene.

"When a health commissioner drops the general work for care and treatment of specific cases, then he has departed from the public health fields and invaded the field of the private practitioner. This sort of thing is 'frowned upon with severity' by the director of the Ohio state department of health. No health commissioner should administer treatment where physicians are available, the director holds, and rightfully.

"Medical services, hired by and paid for from government sources, and handed to folks will always be found both inadequate and unsatisfactory. Free treatment by health commissioners is a direct encroachment upon the field of communism and socialism.

"The ideal, some leaders believe, toward which health officials must work in bringing about an active and sympathetic co-operation with the medical profession is that moral aspect which makes it possible for health officers to think chiefly of their obligations, duties, limitations and responsibilities, and to consider the rights of others. Such a policy is bound to secure the respect, sympathy and eventually the active co-operation of the community practitioners."

The first annual report of the bureau in charge of administering the Sheppard-Towner Maternity act is being distributed. Vermont, Massachusetts, Rhode Island, Maine, Louisiana, Illinois, Kansas and Connecticut have not accepted the law. After summarizing as follows the Editor of the Ohio State Journal injects a pertinent query in this clipping:

"The first annual report of the federal government bureau in charge of administering the Sheppard-Towner Maternity and Infancy act is out.

"Advance notices of this report state that it is the 'first official report of activities under this act, through which congress is permitted to appropriate $1,240,000 annually.'

"These states are listed as not participating: Vermont, Massachusetts, Rhode Island, Maine, Louisiana, Illinois, Kansas and Connecticut.

"Extension of the 'benefits of the act' are recommended in the report for Alaska, Hawaii, Porto Rico and the Philippines.

"During the year a habit-clinic was held at Boston; a survey of nutrition work in nine eastern cities conducted; an investigation of children's diets made in District of Columbia; investigation of rural child labor and its relation to school attendance made in 12 states; investigation of children in street trades made in three cities; and here is the big thing of the report: 821,735 pieces of literature distributed and 98,533 letters received and answered.

"Habit-clinics, rural child labor, school attendance and nutrition work in school may have a relationship to maternity and infancy work, but it would seem that if Sheppard-Towner must impose its federal will upon American folks, there are more fundamentals essential to caring for mothers and infants than social

studies of children after they have left the infant stage.

"There is an old wheeze that there are organizations that set up programs—elaborate things— upon which the budget is raised. The coming year is then spent in altering the elaborate program to raise more money to create a more elaborate program so that more money might be raised. We wonder?"

Lest you forget; pay your annual dues to your local secretary. We are particularly interested in securing prompt payment this year. Our paid membership on April 1 will determine the number of A. M. A. delegates from Michigan in the re-allotment that is to be made in April. Do not permit your neglect to pay your dues deprive Michigan of its present number of delegates.

Correspondence

Editor of the Journal of the Michigan State Medical Society:

ANNOUNCEMENT

The Eighth Annual Clinical Session of The American Congress on Internal Medicine will be held in the Ampitheatres, Wards and Laboratories of the various institutions concerned with medical teaching, at St. Louis, Mo., beginning Monday, February 18, 1924.

Practitioners and laboratory workers interested in the progress of scientific, clinical and research medicine are invited to take advantage of the opportunities afforded by this session.

Address enquiries to the Secretary-General.

Elsworth S. Smith, President,
St. Louis, Mo.

Frank Smithies, Secretary-General,
1002 N. Dearborn Street,
Chicago, Ill.

Editor of the Journal of the Michigan State Medical Society:

As you know, the next meeting of the American Congress on Internal Medicine and the American College of Physicians will be held in St. Louis, on February 18 to 24, 1924 inclusive:

The profession of St. Louis are very proud of the fact that one of our members, Dr. Elsworth S. Smith, was elected President of the American Congress of Internal Medicine at the last meeting in Philadelphia. For this and other reasons the profession of St. Louis is very anxious to have one of the very best meetings held by the Congress within recent years. Dr. Smith has perfected the organization of his committees and we are, at the present time, working very diligently, arranging for hotel accommodations, headquarters, transportation facilities, and for the clinical and scientific programs.

I wonder if you would be kind enough to have a news article in the next issue of your Journal relative to this meeting? I assure you that this publicity, which I feel you will be able to give us, will be greatly appreciated by the St. Louis profession.

1. The next annual meeting of the American Congress of Internal Medicine and the College of Physicians will be in St. Louis, February 18 to 24, 1924.

2. The President of the Congress, Dr. Elsworth S. Smith, has perfected his various committees so that now all committees are working diligently to arrange proper hotel accommodations, headquarters, transportation facilities, scientific programs, and clinical sessions at the various hospitals.

3. The management of the various hospitals and the clinicians of St. Louis are lending themselves very freely for the perfection of the clinical sessions to be held in the hospitals, and for the general entertainment of our visitors.

4. That the Hotel Chase, one of the newest, largest and best equipped hotels of the city, has been selected as headquarters for the Congress and to date several hundred reservations have been made.

5. That the Committee on Hotels announces that all of the hotels of St. Louis are more than anxious to do everything possible to see that our visitors are cared for conveniently and economically.

6. That physicians who desire hotel reservations or any other information regarding the meeting can receive such assistance and information desired by addressing their requests to the President, Dr. Elsworth S. Smith, Humboldt Building, St. Louis, Mo.

I will be greatly obliged if you will let me know whether you find it convenient to assist us in this publicity and, if so, write the article in your own way, covering as fully as possible the points delineated above.

Assuring you that the profession of St. Louis will greatly appreciate any assistance that you can give us, and of our very highest personal esteem, I am,

Most sincerely yours,
J. Curtis Lyter.

State News Notes

COLLECTIONS

Physicians' Bills and Hospital Accounts collected anywhere in Michigan. H. C. VanAken, Lawyer, 309 Post Building, Battle Creek, Michigan. Reference any Bank in Battle Creek.

For Sale—Wall plate, surgical instruments, Harvard chair, dressing table, solution table, mailing cases, microscope and drugs of the late L. P. Parkhurst, M. D. Mrs. L. P. Parkhurst, 246 La Grave Avenue, Grand Rapids, Michigan.

FOR SALE

Eye, ear, nose and throat office equipment and well established practice. A splendid opportunity. 902 Stroh Bldg., Detroit. Dr. James M. Cooper, deceased. Call Main 3881.

Owing to illness in physician's family one of the finest general practices in Detroit will be sold. Cash income exceeds $20,000 yearly. Location ideal. Equipment and furnishings the best. Competition negligible. Sale price at equipment invoice only is $5,000. Included are all home furnishings in situ., valuable appointments and a thorough introduction. Packard coupe optional. Lady office assistant knows entire clientele and will remain if desired.

Fees are excellent. No night calls and no confinements except at hospital. Surgical field unlimited. Ideal place for country physician of personality and ability who wants a wider field.

This is a real opportunity. No answer desired unless you are a successful physician, can come and investigate and have the money .

Possession given anytime between May 1st and July 1st. C/O Journal.

Dr. J. D. Brook, Grandville, has been re-appointed to membership on the State Board of Registration in Medicine.

Dr. H. M. Joy of Calumet has been appointed on the State Board of Registration in Medicine.

The 1924 annual meeting of the American Medical Association will be held in Chicago the week of June 9. We suggest you write early for hotel reservations. All the meetings will be held on the Municipal Pier.

Dr. C. D. Camp, Ann Arbor, addressed the Kent County Medical Society on January 9. His subject was Reflexes.

Our State Committee on Tuberculosis, of which Dr. W. H. Marshall of Flint is chairman, will hold a committee meeting in Northville on April 9 at the time of the meeting of the Michigan Trudeau Society.

The Council of the Wayne County Medical Society has appointed Dr. E. G. Martin as Detroit correspondent for the Journal. We look forward to receiving a goodly amount of live news items and "peppy" comments.

Dr. A. W. Hornbogen of Marquette has been appointed a member of the State Board of Registration in Medicine by the Governor. He succeeds Dr. D. A. Cameron of Alpena.

Dr. and Mrs. A. L. Seeley are spending the remainder of the winter in the south.

Dr. D. Emmett Welsh, departed January 17 for an eight week trip through the south and through Cuba.

Dr. R. R. Smith of Grand Rapids has gone on a three months trip to New Zealand and Australia.

Dr. Gordon W. Heyd, Professor of Surgery, New York Post-Graduate School, on January 28 and 29 delivered the Beaumont Lectures before the Wayne County Medical Society. His subject was "Physiological, Pathological and Clinical Problems of the Liver."

Cancer week will be observed in Detroit this year as follows:

February 16, Dr. A. J. Ochsner will come to Detroit for a clinic in the morning, a lay address in the afternoon and an address to the Wayne County Medical Society in the evening.

The clinic on cancer will be held at Harper Hospital at 10:00 a. m., Saturday, February 16. Sunday will be devoted to announcements from the pulpit.

Monday, Tuesday, Wednesday and Thursday the newspapers will carry informative articles on cancer. The free cancer diagnosis clinics will be held at all Detroit Hospitals, as last year, on Tuesday, Wednesday and Thursday of the week. Activities will thus extend from Saturday February 16 to and including Thursday February 21.

Physicians residing within a radius of Detroit are cordially invited to come to Detroit on Saturday, February 16 for Dr. Ochsner's clinic and address.

The annual meeting of the Board of Trustees of the A. M. A. will be held in Chicago on February 1.

We are informed that Dr. Bliss of Kalamazoo has taken up a permanent residence in California.

Dr. Abrams, of "Electrionic" pseudo-fame died of pneumonia on January 13. It will not be long ere his "machine" also passes into oblivion.

Dr. C. C. Slemons, Grand Rapids, was elected president of the Saladin Temple Shrine Patrol.

Dr. W. J. Mayo has created a $2,000 Lecture Fund for the Medical Department of the University of Michigan. The purpose being to defray the expenses of securing prominent surgeons to deliver a series of lectures each year before the student body of the medical department.

Genesee County Medical Society met for noon luncheon at Hotel Dresden, January 9, 1924. Dr. Max Ballin, Detroit, Michigan gave a very interesting and instructive paper on "Cerebral and Spinal Surgery." Particular reference was made to tumors in those regions.

Dr. J. Curtain, U. of M., 1922, is now associated with the Health Department, Flint, Michigan.

Dr. G. W. Trumble, formerly of Bay City, Michigan, has opened offices in the new Industrial Bank building, Flint, Michigan. Practice limited to Urology.

Dr. J. Nagle, U. of M., 1922, is now associated with the Health Department, Flint, Michigan.

Dr. E. D. Rice, Evart, Michigan, formerly of Flint, has returned and is occupying offices at 609-610 Genesee Bank building, Flint, Michigan.

Dr. D. Brazie, formerly of the Health Department, Flint, Michigan has entered general practice with offices in the new Industrial Bank building.

Dr. Jefferson, formerly of Clintonville, Wisconsin, has located in Flint, Michigan, with offices at 816 Genesee Bank building.

Deaths

The death of Dr. James Purdon of Edmore has been reported. The Doctor was born in 1870 and was a graduate of Jefferson Medical College.

County Society News

CALHOUN COUNTY

The Forty-seventh annual meeting of the Calhoun County Medical Society was called to order by President Zelinsky in the Bridge Room, Post Tavern, Tuesday, December 4, 1923, at 5:05 p. m.

Dr. Wilfred Haughey moved that the minutes of the last meeting be approved as printed in the Bulletin. Seconded by Dr. Stone and carried.

Dr. Wilfrid Haughey moved that the report of the Secretary and Treasurer be accepted as printed in the Bulletin. Seconded by Dr. Winslow and carried.

Nominations were then called for the office of president, and Dr. Kingsley placed in nomination the name of Dr. George A. Haynes, of Homer. There being no further nominations, Dr. Kingsley moved that the nominations be closed, the rules be suspended and the secretary cast the unanimous ballot of the Society for Dr. Haynes for president. Supported by Dr. Stone and carried unanimously. The secretary cast 18 ballots and Dr. Haynes was declared elected president.

Nominations were called for the office of vice-president. Dr. R. D. Sleight nominated Dr. A. F. Kingsley. There being no further nominations, Dr. Wilfrid Haughey moved the nominations be closed,

the rules suspended and that the Secretary cast the unanimous ballot of the Society for Dr. Kingsley for vice-president. Supported by Dr. W. H. Haughey and carried unanimously. The secretary cast 18 ballots and Dr. A. F. Kingsley was declared elected vice-president.

Nominations were called for the office of secretary-treasurer. Dr. R. C. Stone nominated Dr. T. L. Squier. There were no further nominations. Dr. Kingsley moved that the rules be suspended and that the president cast the unanimous ballot of the Society for Dr. Squier for secretary-treasurer. Supported and carried unanimously. The president cast 18 ballots and declared Dr. Squier elected secretary-treasurer.

Nominations were now in order for delegate to the State Society. Dr. R. D. Sleight nominated Dr. C. S. Gorsline. Dr. R. C. Stone nominated Dr. George C. Hafford. Dr. Wilfrid Haughey moved that the nominations be closed, the rules be suspended and the secretary cast the unanimous vote of the Society for Doctors Gorsline and Hafford. Supported by Dr. Winslow and carried. The secretary cast 18 ballots for Doctors Gorsline and Hafford who were declared elected delegates to the State Medical Society.

Dr. Gorsline suggested that the alternate delegates be made delegates at large so that in case of vacancy either alternate could serve. Dr. R. D. Sleight moved the nomination of Dr. W. L. Godfrey as alternate delegate. Seconded by Dr. Kingsley. Dr. Wilfrid Haughey nominated Dr. Parmeter for alternate delegate. Seconded by Dr. Gorsline. Dr. Kingsley moved that the rules be suspended and the secretary cast the unanimous ballot of the Society for Doctors Godfrey and Parmeter. Seconded and carried unanimously. The secretary cast 18 ballots for Doctors Godfrey and Parmeter who were declared elected alternate delegates for the State Medical Society.

The secretary read the following bills: Phoenix Printing Co., Bulletin, $12.00; Cole's Greenhouse, flowers, Dr. Pearce, $5.00; Dr. Squier, mailing Bulletin, $1.36. The bills having been O. K.'d by the Board of Directors, Dr. Wilfrid Haughey moved that the bills be paid. Seconded by Dr. Winslow and carried.

Applications for membership were read the second time from Dr. W. E. Doran of Colon, and Dr. P. B. Keeler of Albion. Dr. W. H. Haughey requested that the applications be referred to the Board of Directors for action.

Dr. Kingsley moved that we proceed to election to fill the vacancy in the Board of Directors, caused by the death of Dr. W. S. Shipp. Supported by Dr. W. H. Haughey and carried. Dr. C. S. Gorsline nominated Dr. G. B. Gessner. Supported by Dr. S. K. Church. Dr. Haughey moved that the rules be suspended and the secretary be instructed to cast the unanimous ballot of the Society for Dr. Gesner. The secretary cast 18 ballots and Dr. Gesner was declared elected to the Board of Directors to fill Dr. Shipp's unexpired term.

The applications of Doctors Doran and Keeler having been approved by the Board of Directors, Dr. W. H. Haughey moved that the rules be suspended and that the secretary be instructed to cast the unanimous ballot of the Society for Doctors Doran and Keeler. The secretary cast 18 votes and Doctors Doran and Keeler were declared elected members of the Society.

There being no further new business to come before the Society, the new officers were installed, and the Society adjourned to the Post Tavern dining-room where the members were joined by their ladies at a banquet. The address of the evening was given by Joseph L. Hooper, who gave a very interesting address on "The Doctor and the Lawyer."

The meeting adjourned.

ST. JOSEPH COUNTY

At the last meeting of the St. Joseph County Medical Society the following officers were elected:

President, Dr. L. K. Slote, Constantine, Mich.; Secretary, Dr. Ray Dean, Three Rivers, Mich.

Ray Dean, Secretary.

IONIA-MONTCALM COUNTY

The Ionia-Montcalm Medical Society met Thursday, December 13, 1923, at the Winter Inn Hotel, Greenville, Mich. Seventeen members were present to enjoy the excellent goose and turkey dinner served by the landlord Welch.

The business meeting was called to order by the president, Dr. Robert Haskell. The result of the election of officers for 1924 was as follows:

President, Dr. A. J. Bower, Greenville; Vice-President. Dr. Fay M. Marsh, Ionia; Secretary-Treasurer, Dr. F. A. Johnson, Greenville; Medico-Legal Officer, Dr. John J. McCann, Ionia; Director, Dr. Robert Haskell, Ionia; Delegate State Society, Dr. Jos. F. Pinkham, Belding; Alternate, Dr. E. R. Swift, Lakeview.

The address of the retiring president, Dr. Robert Haskell will be printed in the State Journal.

It was unanimously voted that a demit from the Ionia-Montcalf Medical Society be granted, Dr. J. W. Hansen, of Menominee, Mich.

Motion made to accept the report of treasurer as read.

It was unanimously voted to admit Dr. Hollard, Belding, Mich., to membership in the Society.

Motion made by Dr. E. R. Swift, seconded by Dr. George A. Stanton that the chair appoint a committee of one to make a reply to the unfair and slanderous articles printed in the Belding Banner attacking the medical profession. Carried.

Preceding the evening program the Society was given some timely advice and council in a pointed talk on "Organization," by Dr. Burton Corbus and Dr. Frederick Warnshuis, speakers of the evening.

The president introduced the first speaker of the evening, Dr. Burton Corbus, Grand Rapids, Mich., who gave a most instructive talk on "Insulin," which was listened to with profound attention. Dr. Corbus was asked a multitude of questions in the course of the general discussion and the doctor convinced the Society by his general reply to them all that he had the patience of Job and was a real philanthropist when it came to imparting his knowledge to the members of his profession.

Dr. Hill, of Grand Rapids explained the laboratory technic of the blood-sugar estimation and the tests for acetine and diacetic acid.

Dr. Coon, Grand Rapids, gave a short talk on the bed-side observation of some cases in hospital under treatment for diabetes with insulin.

The next address of the evening was given by Dr. Frederick Warnshuis, Grand Rapids, "Our Present Attitude to Gall Bladder Diseases." Dr. Warnshuis gave a forceful address which was splendid, complete and concise, driving home the essential factors in the present day treatment of Gall Bladder Diseases. This paper was freely discussed by several members present.

Dr. Robert Haskell was extended a vote of thanks for his interest and efficiency in directing the organization of the new Society and making it a success.

F. A. Johnson, Secretary.

SANILAC COUNTY

Officers for the Sanilac County Medical Society for 1924 are:

President, C. G. Robinson, M. D., Sandusky, Mich.; Vice-President, D. D. McNaughton, Argile, Mich.; Secretary-Treasurer, H. H. Learmont, Croswell, Mich.; Med. Legal, D. D. McNaughton, Argile, Mich.; Delegate, G. S. Tweedie, Sandusky, Mich.; Alternate, John Campbell, Brown City, Mich.

Yours truly,
H. H. Learmont.

ST. CLAIR COUNTY

The annual meeting of the St. Clair County Medical Society was held at the Hotel Harrington on Thursday evening, December 27, at which a large number of members were present.

The following officers for the year 1924 were elected:

President, Dr. Robert C. Fraser; Vice President, Dr. W. W. Ryerson; Secretary-Treasurer, Dr. Howard O. Brush. Dr. A. J. McKenzie was appointed delegate to the next state medical meeting, and Dr. T. A. Heavenrich as alternate.

Howard O. Brush, Secretary.

CLINTON COUNTY

The Clinton County Medical Society has elected and installed the following officers for the year 1924:

President, Don H. Silsby, St. Johns, Mich.; Vice-President, W. M. Taylor, Ovid, Mich.; Secretary-Treasurer, H. D. Squair, St. Johns, Mich.

Delegate and Alternate to the State Convention to be appointed later by the president.

Respectfully yours,
H. D. Squair, Secretary-Treasurer.

HILLSDALE COUNTY

The annual meeting of the Hillsdale County Medical Society was held in the supervisor's room at the Court House, Hillsdale, on Tuesday, Jan. 15,1924, at 7:30 p. m., the President Dr. C. T. Bower in the chair.

After the reading of the minutes, the president gave the annual address, his subject being: "Endocrinology."

Dr. Bower brought out a large amount of recent information on the action of the various preparations of the endocrine or ductless glands in the treatment, or rather prevention, of wound infection, tuberculosis and some of the skin diseases hitherto considered incurable, as psoriasis. Also the wonderful advance in the treatment of diabetes by insulin. He called attention to the imensity o fthe subject, the vast amount of work yet to be done in the field and the necessity for all physicians to keep up with the work as it comes before us.

As neither of the gentlemen named as discussants were present, only a general discussion of the prominent points in the address was possible.

Dr. Walter H. Sawyer then addressed the Society on "The Nursing Problem."

Dr. Sawyer very ably brought out the difficulties of the present situation; from the standpoint of the physician and surgeon, the nursing profession and the public. He pointed out that at least two or three different kinds of nurses with distinct functions and training and the especial need of a greater number of practical nurses, willing and competent to care for the more common cases of illness, as distinct from the surgical cases, at a price within the reach of the average family. He also spoke of the apparent reluctance among young women to take up this kind of work and pointed out some of its evils and causes. He suggested the necessity for the medical profession to take the matter up in its Society meetings and try to formulate some constructive plan to meet its solution.

Both addresses were most interesting and concise and were well worth a long trip to hear.

The secretary-treasurer then gave a brief statement of the finances of the Society and its general progress, and presented two small bills for approval by the Society.

It was moved, seconded and carried that the report of the secretary be accepted.

The Society then proceeded to the election of officers.

Moved by Dr. Green and seconded by Dr. Hanke, "That the present corps of officers be continued for the ensuing year." Carried.

The officers, therefore are, Dr. C. T. Bower, president; Dr. E. C. Bechtol, vice-president; Dr. D. W. Fenton, secretary-treasurer.

There being nothing to do under the head of miscellaneous business, a motion to adjourn was made and carried.

D. W. Fenton, secretary-treasurer.

MINUTES OF THE MEETING OF THE JOINT COMMITTEE ON PUBLIC HEALTH EDUCATION HELD IN DETROIT, JAN. 16, 1924

This meeting was held in conjunction with the Council of the State Medical Society.

Members of the Joint Committee present: President Burton, Doctors Cabot, Huber, Sundwall, Dodge, Warnshuis, Biddle, Jackson, Harison, Cook (representing Dr. J. H. Taylor of Flint, President of the State Dental Society), and Henderson.

In addition to the members of the Council there were present also Doctors Wilson, Dempster and Spalding, representing the Wayne County Medical Society Committee on Public Education, and Miss Mary A Welsh, President of the State Nurses' Association, and Mr. Fred R. Johnson, representing the State Conference of Social Work.

The order of business was as follows:

1. Reading of the minutes of the last meeting held in Ann Arbor October 8.

2. Report of the committee (Doctors Dodge, Cabot, and Warnshuis) appointed by the Joint Committee to consider the advisability of admitting to membership representatives from organizations other than those already represented on the Joint Committee. The Committee recommended that the State Nurses' Association, the State Tuberculosis Association, and the State Conference of Social Work, be affiliated with the understanding that the expenses incurred by the speakers assigned from these organizations be met by the respective organizations from which the speakers are selected. Mr. Johnson called the attention of the Committee to the fact that the Joint Committee would undoubtedly be able to secure co-operation from the American Red Cross, through Mr. Walter Davidson, Manager

of the Central Division of the American Red Cross, 308 North Michigan Avenue, Chicago. The report of the Committee was accepted and adopted.

3. Report on assignment of Health lectures for the current year, by Professor Henderson. Mr. Henderson called attention to the fact that more calls were coming in for health lectures than could be filled by the present lecture staff, and pointed out the urgent necessity for enlarging the staff of speakers, especially as related to geographical distribution throughout the State.

Dr. Jackson, President of the Council, was instructed to communicate with the various County Medical Societies of the State, asking them to select from their membership tentative lists of speakers, such lists to be forwarded to the Secretary of the Joint Committee. The Secretary was further instructed to communicate with the physicians nominated by the various County Societies with reference to selecting new speakers and subjects for the next Health Education Bulletin.

Mr. Henderson was instructed also to communicate with the proper officials of the State Nurses' Association, the State Anti-Tuberculosis Association, and the State Conference of Social Work, relative to speakers and subjects.

4. The report on health lecture program for Detroit and Wayne County by Doctors Wilson, Dempster and Henderson. At the meeting of the Wayne County Medical Society Committee on Public Education, Dr. Harold Wilson, Chairman, held in Detroit in November, 1923, a sub-committee consisting of Doctors Dempster and Spalding, representing the Wayne County Medical Society, and Henderson, Secretary of the State Joint Committee, was appointed to prepare a bulletin announcing speakers and subjects for Detroit and Wayne County. For a list of speakers and subjects, see attached bulletin.

The list of Health Education lectures as submitted by the sub-committee was approved and the co-operation of the Wayne County Medical Society Committee on Public Education with the State Joint Committee was commended. The suggestion that this list of speakers and subjects be incorporated in the forthcoming Joint Committee bulletin of Health Education lectures was approved.

5. Consideration of the communication from Dr. D. M. Cowie, of Ann Arbor, Chairman of the Advisory Committee of the Pediatric Section of the State Medical Society, relative to securing the co-operation of the Joint Committee in the matter of publicity concerning the goitre problem in Michigan. It was moved and carried that Dr. Cowie be asked to submit to the Secretary of the Joint Committee a list of the speakers and subjects for announcement in the next Health Education Bulletin, such lists to be subject to the approval of the Joint Committee.

6. The Secretary of the Joint Committee was asked to prepare and publish the 1924-25 Bulletin of Health Education lectures.

7. The time and place of the next meeting of the Joint Committee was set for noon, April 16, at Kalamazoo.

8. Adjournment.

W. D. Henderson,
Secretary.

PROPAGANDA FOR REFORM

Intarvin—Because of numerous inquiries, the Council on Pharmacy and Chemistry publishes a preliminary report on Intarvin. The product is marketed by the Intarvin Company, Long Island City, N. Y. Dr. Max Kahn has applied for a patent on it. Many statements have been given the lay press by those interested in the promotion of Intarvin, but as yet no publication has appeared in the medical press, except preliminary reports by Kahn. Intarvin is proposed for use in diabetes or in conditions where acidosis occurs. It is a synthetic fat which, it is claimed, can be assimilated by the diabetic without the production of products that causes acidosis, as is the case with ordinary facts when these are consumed by diabetics. Intarvin is stated to be the glyceryl ester of margaric acid admixed with 10 to 12 per cent of liquid petrolatum. While the usefulness of Intarvin is curtailed by the discovery of insulin, it should be valuable in planning a diabetic diet if the claims made for it are substantiated. Intarvin is still in the experimental stage and it is unformtunate that so much newspaper notoriety has been given it. Until acceptable evidence is available for its usefulness, palatability and practicability, judgment of its worth must be suspended.—(Journal A. M. A., Jan. 5, 1924, p. 51.)

Chemical Foundation Wins.—During the late war, our government seized many German patents on synthetic drugs. Later the Alien Property Custodian, on executive order of President Wilson, sold 4,700 German chemical patents to the Chemical Foundation, Inc. This corporation agreed in turn to license any American firm that could present evidence of reliability in chemical manufacture to manufacture under these patents. As a result of this action, physicians may today obtain different brands of arsphenamin instead of one proprietary "Salvarsan"—and at competitive prices. The same is true of other useful synthetics. About a year and a half ago, President Harding instructed the Alien Property Custodian to take steps to secure the return of all patents sold to the Chemical Foundation, Inc. on the ground that the price paid was inadequate and the transaction illegal. Suit was instituted by the government against the Chemical Foundation, Inc. for the recovery of the patents. The suit was won by the Chemical Foundation, Inc. In the decision of the court, it was held that the price was adequate, for the reason that many of the patents were nonworkable and that, therefore, because of the financial risk and hazard, the value of the patents "was too slight and problematical to warrant the payment by American citizens of a sum even remotely approximating what they might have been worth to the German owners for their monopolistic purposes." Hence, the bill of complaints filed by the government was set aside.—(Journal A. M. A., Jan. 12, 1924, p. 130.)

The Action of Salicylates, Cinchophen, Neocinchophen and Related Products.—The latest (1923) edition of Useful Drugs speaks of the salicylates, cinchophen, neocinchophen and related drugs as "highly efficacous" and "exceptionally efficient" in the management of certain phases of arthritis. The assumption that the drugs exert an etiotropic action by destroying pacterial agencies responsible for the disease has repeatedly been disproved. They do not function as germicides, for evample, in rheumatic fever assumed to be caused by micro-organisms. Recently, Hanzlick and Painter compared the antiphlogistic effect of salicylates cinchophen and neocinchophen in experimental edema of head and neck. They concluded that the so-called antiphlogistic action of these drugs as exemplified in the prompt amelioration of objective signs or inflammation, including the swelling and edema of the joints, is not due to a direct action on the inflammatory process. Experimental edema of the head and neck in animals was not beneficially influenced by previous and simultaneous treatment of the animals with sodium salicylate, cinchophen or neocinchophen. Negative results with respect to antiphlogistic effects

have also been observed in the treatment of other kinds of edema. Consequently it is concluded that the beneficial effects of these drugs in rheumatic fever appear to be produced neither through etiotropic nor organotropic, but rather through symptomatic action, the benefits being mediated through antipyresis and analgesia.—(Journal A. M. A., Jan. 19, 1924, p. 213.)

Diphtheria Antitoxin for the Infant.—In the presence of diphtheria, no age is a contraindication to the administration of antitoxin. The dose for infants of from 10 to 30 pounds and under two years of age has been given as from 2,000 to 10,000 units. The immunity to diphtheria in young infants seems to depend on antitoxin received from the mother through the placental circulation. This immunity is possessed by more than 90 per cent of children in the early weeks of life, but at the end of a year this has been lost by about half of them. Serums are well borne by young children, as they have little sensitiveness to foreign proteins. A suitable immunizing dose of diphtheria antitoxin for an infant would be from 200 to 500 units, and the therapeutic dose from 2,000 to 10,000 units.—Journal A. M. A., Jan. 19,1924, p. 228.)

Dermatosis From Fur.—Reports have been published of persons who have suffered severe eruptions and irritations of the skin following the wearing of furs. Investigation has shown that these disturbances are caused by paraphenylendiamin which is used to dye furs black and quinone, an oxidation product of paraphenylendiamin which gives a brown color. The untoward effects may be prevented largely by extreme care in the finishing and dying processes with special attention to remove all excess dye, and particularly traces of quinone from the fur.—(Journal A. M. A., Jan. 26, 1924, p. 307.)

Effects of Bromids on Epilepsy.—The harmful eeffects of the prolonged administration of bromids aside from the skin and intestinal effects, are gradually increasing dullness, heaviness, torpor, stupidity, with greater self centering of interests and unintelligence. The size of the dose that is necessary to control the fits is probably an important factor in determining the amount of damage that will be done.—(Journal A. M. A., Jan. 26, 1924, p. 325.)

THE CHICAGO SESSION A. M. A.

Reduced Railroad Rates

The passenger associations of various sections of the United States have established a rate of one and one-half fare for the benefit of those who will attend the Seventy-fifth Annual Session of the American Medical Association. The benefit of this rate will be extended to members of the Association and to members of their families who accompany them to Chicago. It will be necessary to purchase tickets to Chicago, paying the regular fare. At the time tickets are purchased, certificates must be secured from the railroad agents. These certificates must be validated by the Secretary of the Association and by the railroad representatives at Chicago. After validation, the certificates will entitle holders to a rate of one-half fare for the return trip to their homes. Tickets for the occasion will be placed on sale in the extreme far western states not later than June 3; in territory nearer to Chicago, the dates of sale will be adjusted in accordance with distances to be traveled.

Hotel Reservations for Delegates

The House of Delegates instructed the Secretary of the Association to arrange for hotel accommodations for all delegates during the Seventy-fifth Annual Session of the American Medical Association, to be held in Chicago, June 9-13. In compliance with these instructions, tentative reservations have been made at the Drake Hotel, Chicago, so that each member of the House of Delegates may be assured of a room at that hotel. The names of all delegates, as far as they are known at the present time, have been sent to the management of the hotel, and letters have gone out to all delegates for the reservation of such accommodations as may be desired. In writing the hotel, delegates should be careful to specify that the accommodations desired are to be provided from the allotment of rooms tentatively reserved for members of the House of Delegates. Reservations should be made at the earliest possible time. If, for any reason, a delegate does not wish to have accommodations at the Drake Hotel, he should so notify the Secretary of the Association as soonas possible in order that reservations tentatively made and not required may be released for the accommodation of other members of the Association.—(Jour. A. M. A., Jan. 19, 1924.)

ANTACIDS IN THE MEDICAL MANAGEMENT OF PEPTIC ULCER

The toxic symptoms most often noted in cases of peptic ulcer are headache, aversion to food, dry mouth, excessive thirst, lassitude, nausea, and sometimes vomiting. With some patients these symptoms appear soon after beginning the alkalis, with others later on. At times they pass away in a few days even though the alkalis are continued in the same amounts, indicating, perhaps, that the organism in these cases makes some sort of a compensatory adjustment to them, either through freer elimination or by establishing some sort of tolerance to them. Again, the toxic symptoms become so pronounced and persistent that the alkalis have to be stopped for a few days, and sometimes the symptoms return as soon as the alkalis are resumed, so that they have to be abandoned at least in quantities sufficient to continuously neutralize the free hydrochloric acid. Accumulating experience makes it clear that ulcer-bearing patients with damaged kidneys should be given alkalis with considerable caution. On the amounts usually required with the alkaline treatment, they seem to develop toxic symptoms easily, and to show definite signs of further reduced kidney function and renal damage in some instances. Howard F. Shattuck, Edward L. Rohdenburg and Lela E. Booher, New York (Journal A. M. A., Jan. 19, 1924), prefer a combination of tertiary magnesium sulphate and calcium phosphate. It gives a relatively rapid neutralizing effect combined with a more slowly acting one, though it has less neutralizing power than the present commonly used combination of sodium bicarbonate, calcium carbonate and magnesium oxid. The amounts required varied from the equivalent of about 10 grains (0.65 gm.) each of magnesium phosphate and calcium phosphate every hour, to 25 grains (1.6 gm.) of each every hour, the average being about 15 grains (1 gm.) of each every hour. In all cases the urine remained acid. Thus far, no toxic symptoms have appeared even when the phosphates were increased to 40 grains (2.6 gm.) of each every hour. Studies of the urine, blood pressure, and phenolsulphonephthalein excretion have shown no abnormalities arising during the administration of phosphates. For the most part, the phosphates gave the same symptomatic relief as the alkalis to ulcer patients, although in some instances they did not. When they did not give complete relief, alkalis were given for short periods, and later on the phosphates were resumed with satisfactory results.

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Original Articles

LOCAL ANESTHESIA*

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GRAND RAPIDS, MICH.

The history of the development of local anesthesia forms one of the most interesting chapters in medicine. It dates back in ancient times to the efforts of the human race to find means for relieving pain during the dressing of wounds received in combat. To enter the long story of the gradual advances made since then would require much time upon a subject with which we are not essentially concerned. However, it may be well to state that the local anesthesia of today has been made possible through the invention of the first hypodermic syringe by F. Rynd (1) of Edinburgh in 1845 (erroneously attributed to Wood) and the first use of cocain, by Karl Koller, at the Ophthalmological Congress at Heidelberg in 1884. Later advances were made by Reclus, Schleich, Bier, Braun, Pauchet, Crile, Labat and others.

During the last ten years there has been a marked tendency toward increased interest in the application of local anesthesia in general surgery. This may be attributed to the comparatively recent discovery of certain synthetic preparations of low toxity, which have resulted from the efforts of the medical profession to obtain a safe and successful agent of anesthesia that produces the least post-operative complications and has the lowest mortality risk. These discoveries resulted from efforts to overcome disastrous experiences encountered from the extremely toxic effects of cocain and have been productive of the universally accepted preparation known as novocain, which is about six to ten times less toxic than cocain and is regarded as safe, efficient and inexpensive.

Recent medical literature contains many enthusiastic reports showing the adaptability of local anesthesia in the various fields of surgery. Since so much attention has been directed toward this subject, it seems appropriate to present a statistical study of all local anesthetics administered in Butterworth Hospital during the past five years and to briefly review the advances made in local anesthesia to its present day status.

The study of cases was conducted in a manner so as to secure information referring to the following points, namely:

1. The number and classes of operations performed.
2. The percentage relation of local to general anesthesia.
3. Classification of ages.
4. Numerical classification of minor cases.
5. A tabulated study of major cases.
6. A consideration of local and combined local and ether anesthesia, showing the absence of complications.

PLAN OF STUDY
STATISTICS

Chart I.—Number of Cases

Major Operations	112
Minor Operations	222
Tonsillectomies	508
Removal of Laryngeal Papilloma	1
Submucous Resections	66
Acute Mastoid	1
Eye Operations	47
Total	957

In the above chart the classes and number of operations are listed. Hereafter only the major and minor operations are considered in relation to information appearing upon subsequent tables.

Chart II.—Years

	Major	Minor	Total Local	Total General	Total Operations	% Relation
1919	16	7	23	2,115	2,138	.01
1920	22	40	62	2,088	2,150	.029
1921	21	74	95	2,674	2,769	.035
1922	33	69	102	2,773	2,875	.036
1923	20	32	52	2,709	2,761	.019
Total	112	222	334	12,359	12,693	.027

Here the number of major and minor cases, general anesthesias, total operations and percentage relation of local and general anesthesia for each year are studied. A diminution of the number of local anesthesias exists in 1923, when compared with that of the year previous. This is partly offset by the fact that the total number of operations performed was also reduced. Of all

*Read to the Kent County Medical Society, January 23, 1924, Grand Rapids, Mich.

anesthesias it is seen that local bears a relation of .027 to that of general.

Scannell's (2) service at St. Catherine's and Greenpoint Hospitals reports statistics which may be compared.

Local Percentage Relation

1919	.18
1920	.39
1921	.57

This increase is largely due to the greater volume of patients and also preference for regional anesthesia at these hospitals.

Chart III.—Ages

	Major	Minor	Total
6 weeks to 10 years	2	2	4 cases
10 to 20 years	10	17	27 cases
20 to 30 years	18	65	83 cases
30 to 40 years	22	35	57 cases
40 to 50 years	12	36	48 cases
50 to 60 years	16	20	36 cases
60 to 70 years	16	25	41 cases
70 to 80 years	14	17	31 cases
80 to 90 years	2	4	6 cases
90 to 100 years	0	1	1 case
Total	112	222	334 cases

Youngest Patient, 6 weeks. Diagnosis: Pyloric Hypertrophy Laparotomy. Died.
One case 2 months. Diagnosis: Strangulated Hernia. Recovery.
Oldest Patient, 92 years. Diagnosis: Axillary abscess. Recovery.

The ages for major cases show that the greatest numbers are between 30 and 40 years. Possibly this is due to preference of patients of this age for the local form of anesthesia, or to contra-indications for a general anesthetic. The greater number of anesthetics in minor operations are upon patients between 20 and 30 years. This is explained by the fact that many industrial injuries, for which a large percentage of local anesthesias in minor surgery are administered, occur in young employes. In this series the youngest recovery case upon which local anesthesia was used was two months. Farr, (3) in 1920, reported successful anesthesia for the repair of inguinal hernia in a child of eighteen months. Since then he has employed local in all types of operations upon children and considers it the anesthesia of choice. He states that the psychic element may be largely ignored and, as a rule, the restraint is far less than that required when general anesthesia is used. Children may be, and indeed often are, frightened at the new strange surroundings and very young ones must be restrained by mechanical means, especially during the early part of the procedure. Once the child learns that he will not suffer pain he usually quiets down and submits without objection. In Farr's experience with children the use of novocain has proven without toxic effects. Patients of advanced ages tolerate local anesthesia without effect and advantages gained are many, namely, avoidance of pulmonary, kidney, liver and cardiac complications, thereby reducing contra-indications for surgery.

Chart IV.—Minor Cases

Operations upon fingers and toes for amputations, etc.	135
Breast Tumors	16
Circumcisions	15
Hemorrhoidectomies	8
Perineal Operations	2
Removal of Tumor of Testicle	1
Incisions for infections various parts of body	36
Removal of foreign bodies	7
Varicocele	2
Total	222

These cases are simply enumerated for interest.

Chart V.—Major Cases.

Diagnosis or Operation	No.	Local	With Ether	N2O	Successful Yes	Successful No
Inguinal Hernia	25	23	2	..	23	2
Inguinal Hernia, Strangulated	3	2	..	1	2	1
Femoral Hernia, Strangulated	3	1	2	..	1	2
Ventral Hernia	1	1	..	..	1	..
Hydrocele	6	3	3	..	5	1
Orchidectomy and Cord	2	2	..	..	2	..
Thyroidectomy	6	5	1	..	5	1
Thyroid Ligations	14	11	3	..	11	3
Appendicial Abscess	4	4	..	..	4	..
Gastro-Enterostomy	1	....	1	..	....	1
Gall Bladder (1 rupture, 1 chronic, both died).	2	1	1	..	....	2
Exploratory Laparotomy	5	2	3	..	2	3
Omental Adhesions to Abdominal Wall	1	1	..	..	1	..
Ascites of Abdomen	2	2	..	..	2	..
Tubercular Peritonitis	1	....	1	..	....	1
Gunshot Wound of Abdomen	1	1	..	..	1	..
Carcinoma of Intestines	1	1	..	..	1	..
Lung Abscess	2	2	..	..	2	..
Empyema, with Rib Resection	9	9	..	..	9	..
Pelvic Abscess	1	1	..	..	1	..
Prostatectomy	4	1	3	..	1	3
Suprapubic Cystotomy for Urinary Obstruction	18	16	2	..	15	3
Total	112	89	22	1	89	23

This tabulation of major cases gives the nature of operations, number of local, combined anesthesias and successes obtained. This is self-explanatory, but when compared with other tables shows a minority of the volume of cases presented by Butterworth Hospital's records.

Chart VI.

	Major	% Relation
Local, unassociated with General Anesthetic	89	.797
Local Anesthetic, combined with less than 3 oz. of Ether	22	.195
Local Anesthetic, combined with Nitrous Oxide	1	.008
Total	112	
Local Anesthetics, used with Adrenalin	42	
Local Anesthetics, reported as successful in Anesthesia	23	
Number of Deaths in all major cases, due to pathology present (One patient had Chronic Nephritis prior to operation and developed Acute Nephritis, Uremia and Death subsequently.)	13	
Number of Complications reported, due to use of local anesthetic	None	

The most interesting feature is the percentage relation of local and combined cases, when compared with the table of Labat (4). In Butterworth Hospital the percentage of successful anesthesia is 79 plus, while that of Labat is 88. The larger number of cases and a technic beyond reproach ac-

counts for a very high rate of success, as presented by the latter.

According to Chart VI, no complications traceable to anesthesia were observed. Denk (5), of the Eiselberg Clinic of Vienna in 1919 and 1920, reported interesting statistics regarding pneumonia which developed in cases in which combined anesthesia of local and ether, in less than three ounce amounts were used. In 895 major cases with this method there were 14 cases of pneumonia, with four deaths. In a similar study of cases of local anesthesia alone, there was one case of bronchitis and 12 cases of pneumonia, with two deaths. This seems to argue that pneumonia is as liable to develop in cases of local as in cases of combined local and ether narcosis. However, some of these patients might have been operated when latent infection existed and developed after operation. If general anesthesia had been considered the operation might not have been performed. Dr. William J. Mayo (6) states that a large majority of pulmonary complications following surgical operations are embolic and appear quite as commonly after regional as after general anesthesia. He mentions that advantages are to be gained in the administration of local anesthesia in cases of intestinal obstruction, where regurgitated material may be aspirated into the lungs during general anesthesia.

A review of the literature published during the last five years reveals the use of regional anesthesia in almost every field of surgery. It appeals to one that within the near future local anesthesia has greater practical possibilities. In 1913 Finsterer (7) reported at the Drollinger Clinic in Budapest that frequency of operation without general narcosis was 95 per cent and predicted that in the near future indications for general anesthesia would have to be established prior to operation.

TECHNIC

The progress of local anesthesia in the various departments of surgery, since the introduction of novocain, has depended upon perfected methods of administration applied only after thorough experimentation and guided by an accurate knowledge of regional anatomy. This is exemplified in the following classification for technic, which covers almost every field of surgery:

1. Infiltration.
2. Field Blocking.
3. Regional.
   a. Conduction.
   b. Spinal.
   c. Splanchnic.
   d. Sacral.

The infiltration method consists of the injection of large quantities of anesthetizing solution into the tissues without regard to the anatomical relation of the nerve supply. Reclus and Schleich (8) in the early days of regional anesthesia used the infiltration method in the line of incision and found it easy and successful for good anesthesia where the tissues permitted the injection of large quantities of fluid. The entire study of Butterworth's cases brings out the fact that only those were selected for operaction to which the infiltration and field block techniques were adapted, namely hernias, thyroids, prostates, suprapubic cystotomies, empyemas, hydroceles and exploratory laparotomies, requiring very little visceral manipulation. In no instance did the patients' chart indicate that any other forms were employed.

Successful operations of the head, including trephine and brain tumor, have been accomplished by many operators, especially the French. Local and regional methods are especially adapted to cases where loss of consciousness would prove harmful to the patient. An excellent demonstration of this form of anesthesia was witnessed by the writer. Upon a recent visit to the Mayo Clinic, a case diagnosed as neoplasm of the upper cervical spinal cord was operated. The back, neck and occipital area of the head were injected with combined infiltration conduction methods. Incision was made without pain. Previous to operation the patient complained of pain, disturbances of sensation and muscular spasm in the right arm and leg. During operation the surgeon pressed upon a certain area and the patient cried out, "Oh, my right leg hurts when you do that." Upon further examination a small tumor was found attached to the cord, which he attempted to remove. Under general anesthesia identification would have been impossible. This emphasizes also the co-operation between patient and surgeon.

By field block of comparatively large areas of skin plastic surgery of the head, face and neck are successfully carried out by Pauchet (9), Labat and Braun. During the World War, thoracic surgery gained many of its rapid advances by field block and conduction methods where general narcosis would have been largely detrimental, if not fatal.

SPINAL ANESTHESIA

With spinal anesthesia Labat and Pauchet have operated upon a series of approximately 2,000 cases with only two deaths. Hugh Cabot (10) performed 180 thigh amputations, 90 under ether and 90 under spinal anesthesia, with the result that the mortality

under spinal anesthesia was 50 per cent below that of those done under ether. Spinal anesthesia, when successfully applied, gives excellent results, but due to the fact that there is a greater risk associated with the intra-spinal injections and on account of the headache which is sometimes encountered post-operatively, it has fallen into disfavor with some operators. It should be administered in no instance except by one well versed in its technic and possibilities. Other forms of spinal are extradural, paravertebral and caudal.

SPLANCHNIC ANESTHESIA

The splanchnic method of Kappis has been successfully used by Finsterer (11) since 1912 in 241 cases of gastric carcinoma, in which he was able to perform resections in 138 cases or 57.27 per cent in patients ranging in age up to 70 years. He had 24 deaths or 17.3 per cent mortality, a large number of which were due to extension into the oesophagus. Excluding those cases which would formerly have been considered inoperable, on account of local extension, the mortality is reduced in the 241 cases to 5 deaths or 8.3 per cent. Of 178 resections for ulcer, 17 patients were between 60 and 70 years old, and not one died. Finsterer uses combined conduction and infiltration of the abdominal wall together with splanchnic anesthesia, which he produces by introducing his needles through the back. He prefers general narcosis in all cases where infection is present. All of his cases were preceded with hypodermic injections of morphin and scopolamine, which is used by practically all advocates of novocain.

SACRAL ANESTHESIA

The sacral technic, of which pre-sacral and trans-sacral are modifications, has been used with limited success by Rubsamen (12) at the Women's Clinic in Dresden. In a series of 51 cases of major abdominal, pelvic and perineal operations, he reports complete anesthesia in 86 per cent of all cases. Where the operations required long periods, ether inhalation was necessary for successful anesthesia. He argues for sacral anesthesia in preference to spinal in the relation that there are no associated headaches and that the risk is less. Meeker and Frazer (13) of Rochester report enthusiastically upon 225 cases of trans-sacral nerve block anesthesia operated upon with improved technic and show that they obtained practically 100 per cent absolute anesthesia of the pelvic floor in such cases. The trans-sacral technic requires practice and patience and must be accompanied with a technical knowledge of the anatomy. Sacral anesthesia has also been employed by Scholl (14) in 150 urological examinations, including cystoscopy. 140 of the 150 cases gave successful anesthesia. In 7 cases failure was due to what he reports as individual resistance to the novocain and to errors in technic; two cases to anatomic deformities of the sacrum; and in one case to the extension of a malignant process into the sacral cord. Two patients of this series had to be given a general anesthetic.

Meeker and Bonar (15) have very recently reported upon 90 cases in Cook County Hospital where a modified trans-sacral method of anesthesia was employed to produce successful and painless deliveries in Obstetric cases. The technic was applied to normal and operative cases. They were able to secure a more complete relaxation of the pelvic floor than in any other form of anesthesia, and could perform painless operations for incomplete abortions, including packing of the uterus and insertion of the colpeurynter. Their greatest difficulty was to secure delayed absorption of the anesthetic solution used. No ill effects were noted. This is apparently the very latest achievement within the scope of regional anesthesia.

CONCLUSIONS

Without becoming overly enthusiastic upon the subject of local anesthesia, it seems fitting to therefore draw the following final conclusions:

1. Statistical study of local anesthesia cases shows that the number of complications and mortality risk are decidedly low.
2. With proper technic and due consideration of regional anatomy, major surgery under regional anesthesia is quite practical.
3. The tendency of enthusiastic advocates of local anesthesia is to develop each field with slow and practical progress.
4. Predictions are made that local anesthesia may largely over-ride general narcosis.
5. Future development depends upon successes obtained in present practical application.

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SARCOMA OF THE MEDIASTINUM

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Primary sarcoma of the mediastinum, though rather uncommon, is by no means a rare disease. Herbert (1), in an exhaustive study, reports the disease to have occurred in one in every 292 cases admitted to Victoria Park Hospital in the years 1908-1917, and Ross (2), reporting on statistics from the Brompton Hospital during the years 1900 to 1913, found sarcoma in one in every 350 admissions. Rendu (3) says, "When in a subject not predisposed by diesthetic antecedents a cough develops, likewise difficult breathing, although no change in the lung or the heart can be detected by ausculation, this is already a presumption that the mediastinum is involved."

The symptoms vary considerably according to different reports, but can be enumerated best perhaps by their prominence and time of occurence:

(a) Dyspnoea from pressure or irritation, or from paralysis of the phrenic, vagus or sympathetic nerves;

(b) Cough, often of a hacking character, usually with only a small amount of sputum which may be streaked with blood;

(c) Pain which varies greatly in severity and location and frequently increases progressively;

(d) Night sweats often without, or not in proportion to, elevation of temperature;

(e) General increasing weakness;

(f) Loss of weight which is usually slight early in the course of the disease and not in proportion to the asthma, although it may be one of the earliest and most prominent symptoms;

(g) Hoarseness and difficult swallowing;

(h) Venous dilatation usually rather late and occurring on the front of the chest, abdomen, neck, shoulders and arms, face, and occasionally in lumbar region;

(i) Oedema which follows venous dilatation;

(j) Cyanosis especially of the face;

(k) Contracted pupils may be an early finding although rarely reported;

(l) Mental changes and coma are late manifestations.

Most of the above group of symptoms are signs of compression of the intrathoracic viscera and Dieulafay states, "It is this ensemble of symptoms which constitutes the *mediastinal syndrome,* which more or less complete, will allow one to affirm the existence of a tumor of the mediastinum." However, the early symptoms may be very meagre or simulate those of other conditions of the heart, lungs or bronchi, and make a diagnosis exceedingly difficult.

The diagnosis is dependent on the occurrence of the clinical symptoms, the physical and laboratory findings, and the X-ray and fluoroscopic findings which are almost indispensable. Laryngoscopic examination should be made for early abductor paralysis and for compression. There is a period of indefinite duration where, on account of lack of distinct signs, exact diagnosis can be made only with great difficulty and even then, principally by exclusion. With the symptoms indicating a tumor of the mediastinum, the differential diagnosis must be made between malignant tumors, tuberculous adenopathies, Hodgkin's disease, syphiloma, aneurysm of the aorta, dermoid or hydrated cysts, retrosternal goiter and mediastinal pleurisy.

MALIGNANT TUMORS

The absolute differentiation between sarcoma, carcinoma or lymphosarcoma is very difficult during life, although carcinoma is more often secondary in the chest. After a latent period the rapid development of symptoms referable to the mediastinal syndrome is indicative of malignancy.

TUBERCULOUS ADENOPATHIES

These do not simulate the clinical picture of malignant neoplasms except tuberculosis of the tracheobronchial lymph nodes in children, and here the physical findings in the lungs, the temperature curve, the family history and predisposition, the skin reactions and X-ray of the chest, make the differentiation.

Hodgkin's Disease—Early manifestations are usually in the cervical glands, but in cases where the mediastinal glands are first affected the marked reduction by X-ray therapy is pathognomonic.

Syphiloma—The clinical picture may so sim-

ulate a malignancy that in the absence of a positive history, luetic reaction of the blood and spinal fluid, and a luetic stigmata, a differentiation cannot be made except by the ultimate evolution or the response to specific treatment.

Aneurysm of the Aorta—This may produce all the pressure symptoms of the solid tumor, but is more apt to cause bulging in the sternal region. The cardiovascular symptoms, especially the moderate hypertrophy of the heart, accentuated second sound, tracheal tugging, and difference between the radical pulses, are marked and usually absent in solid tumors.

Dermoid or Hydrated Cysts—On account of the predisposition to median line growth, these tumors of the base of the neck and of the chest are definitely in the mediastinum or in the immediate vicinity. The X-ray may be the only means of differentiation and may disclose shadows indicating bones or teeth within a distinct contour of a membranous wall, usually circular with a homogeneous opacity, while the malignant tumors are of various shapes with irregular margins and varying density.

Retrosternal Goiter—Most of the mediastinal syndrome may be present and accompanied by mild physical signs with the dullness very high up, while in neoplasms these are usually quite marked.

Mediastinal Pleurisy—A collection of fluid between the layers of the mediastinal pleura may give all the pressure symptoms of a neoplasm. With the physical signs and fluoroscopic findings of changes in fluid levels, with changed positions, and often if an acute febrile condition is present, the diagnosis is quite readily made.

The secondary involvement in sarcoma of the mediastinum is especially evident in the lungs, and particularly in the right lung. In a summary of statistics taken from a large number of cases of different authors, the average involvement was fifty-eight per cent in the right lung and twenty-five per cent in the left lung. The involvement in both lungs varies from four to twenty-five per cent. This variation may be partially accounted for by the fact that some authors considered the lungs involved only when the autopsy findings showed evidence of changes in the glands about the hilus and the lung roots, but not in the pulmonary tissue itself. Secondary metastases extending to the abdomen vary considerably, but are often found in the liver, less frequently in the suprarenals, spleen and kidneys, and in a small number of cases in the pancreas. The spread to the abdomen may be either along the lympathics or by metastasis along the great veins if their walls have been pierced. The brain is rarely involved, but subcutaneous tissue changes are frequently effected and in a small number of cases the cervical glands give almost a typical picture of Hodgkin's Disease.

PROGNOSIS

The prognosis is usually unfavorable because the diagnosis is seldom made until the disease has involved considerable tissue and the pressure symptoms are pronounced. In Herbert's series of cases the minimum duration of the disease was eleven weeks, the maximum sixty-six weeks, while in Ross' series the minimum was nine weeks and the maximum eighty-eight weeks, with an average in the two series of thirty and thirty-two weeks respectively.

TREATMENT

Various treatments have been tried with but little more than temporary success in a few cases. Arsenic and the iodides have been used quite generally but without results, except in osme instances where the rapidity of the growth has been slightly checked. Surgery, except tracheotomy in spasms of the glottis for temporary relief, has not proven to be of value. X-ray treatment has seemed to temporarily check the growth in some cases while in others it has apparently stimulated it and possibly intensified certain symptoms. Duncan reports four cases in which radium has markedly decreased the growth and promptly improved the symptoms.

REPORT OF CASES

L. J., age 29, Hebrew, married, male. Admitted August 1, 1922.

Previous history: Frequent headaches as a child, brought on by excitement. Catarrhal jaundice at 22. Uncomplicated Neisserian infection at 23. Measles at 25.

Habits: Smokes 20 cigarettes per day. No alcoholic liquors or drugs.

Present History: On December 2, 1921, taken with lobar pneumonia involving lower lobe of left lung. This was apparently uncomplicated and he returned to work January 15, 1922. On March 15 he had what was called a "nervous breakdown" and was confined to his bed for a week. In April an X-ray examination was made and shadows over lower left chest were found. Following this, ten ounces of straw-colored fluid were aspirated from chest and patient returned to work immediately.

On June 1, 1922, he developed a pain in the left side of the chest and temperature of 103°. After thorough catharsis temperature returned to normal, but a laryngitis followed. He expectorated several small clots of blood and voice became husky and remains so at the present time. Now has a continual irritation in larynx for which he frequently clears the throat. No pain in chest or cough since. Has been confined to his bed most of the time for past eight weeks on account of weakness. Slight evening rise of temperature for past ten days (99-100°).

Physical examination: Poorly nourished and developed. Height, five feet, six inches. Weight, 105 pounds. Cervical, axillary, cubital and inguinal glands are normal in size. Apex beat in fourth interspace left sternal line. Trachea is pushed about half an inch to right. Tactile fremitus absent over lower portion of chest with marked flatness and an occa-

sional faint breath sound. Abdomen is negative. Left undescended testicle, tender to touch, two inches above external ring. Extremities, reflexes and pupils negative.

Laboratory reports: Urine negative. Blood count August 1: Red cells, 5,050,000, white cells, 7,800, hemoglobin, 98. September 1: Red cells, 5,110,000, white cells, 9,600, hemoglobin, 100. Wassermann negative. Non-protein nitrogen, 38. Blood sugar, 80. Polymorphonuclears, 81 per cent; small lymphocytes, 14 per cent; large lymphocytes, 4 per cent; transitional, 1 per cent. September 1: Polymorphonuclears 79 per cent; small lymphocytes, 15 per cent; large lymphocytes, 4 per cent; Eisinophils, 1 per cent; basophils, 1 per cent.

X-ray stereoscopic plates August 2: Right Lung: Thickening and fibrosis of lung root zone. Left lung: In apex, bulging out from mediastinum, are irregular, rounded, nodular masses extending out to within circle of first rib and downward in bunch-like formation to upper part of lung root. The whole lower portion of lung is thickened. Oblique plate: Posterior mediastinum is obliterated by enlargement of glands.

Stereo plates, August 9: Shadow at base of left lung, more dense and nodular masses distinctly enlarged compared with plates a week ago.

Stereo plates, September 2: Mediastinum pushed to right; right heart border two inches out of place toward the right. The left lung is obliterated with dense shadow, not as dense in upper third as at base. Outline of tumor masses show definite increase in size and shape as compared with previous plates.

Stereo plates, September 18: Increase in shadows in base of left lung. Shadows which extend out from upper mediastinal area into left thorax doubled in size as compared with plates of August 2.

Examination of larynx: Some edema of the arytenoepiglottic fold. No ulceration.

Sputum: No acid fast bacilli or elastic tissue. Complement fixation test for tuberculosis negative.

Treatment: Patient was given 500 milliampere minutes of deep X-ray.

Patient died October 18. Autopsy showed left lung completely involved except about two inches of the apex. Mediastinum filled with involved glands. Retroperitoneal chain of glands involved, but no growth was found in the abdominal organs. New growth spindle cell sarcoma.

Case 2.—M. V. C., age 38, American, female, single.

Family and previous history, negative.

Present condition: Nine months ago, developed severe cold in chest after having been bowling. Cold lasted several months. Had pain in chest. Began to lose strength and weight quite markedly. Four months ago had X-ray of chest on account of some cervical adenitis. Adenitis disappeared under X-ray treatment, but pains in chest and dyspnoea grew worse.

Physical examination: No cervical or axillary glandular enlargement. Left lower chest is larger than right. Varicose veins on both breasts and on chest wall. No breath sounds heard in the left chest anteriorly. Posteriorly breath sounds much diminished on left side.

Laboratory findings: Urine shows trace of albumin. Blood count: Red cells, 4,680,000; white cells, 6,000; hemoglobin, 87. Polymorphonuclears, 87 per cent; large lymphocytes, 3 per cent; small lymphocytes, 6 per cent; eisinophils, 3 per cent. Many cremated red cells.

Stereoscopic plates: The mediastinal glands are enormously enlarged. There is a tumor-like mass filling all the mediastinal area. The left chest cavity is completely obliterated over the lower two-thirds of the lung. The right lung shows an extensive encroachment due to the enlarged mediastinal tumor running the entire length of the thoracic cavity.

Treatment: Patient was given 950 milliampere minutes of deep X-ray to the chest, side and back. Grew progressively worse under treatment.

Case 3.—J. C. G., age 29, Spanish, single, male.

Family and previous history, negative.

Present condition: Two months ago, after a dinner of sea foods, felt nauseated and had a sense of something choking him. Since then he has felt a sense of suffocation and dyspnoea, which has become more and more marked until at present he is unable to assume a reclining position. Coughs a good deal, which aggravates the chest pain and frequently raises some blood-stained mucus. No heart discomfort. Slight nausea and vomiting at times. Some eructation of gas. Has lost 35 pounds in weight. Sleeps very poorly on account of pain and dyspnoea. No difficulty in passing urine. Neisserian infection fourteen years ago. No luetic history. No headache. Somewhat nervous. Bowels move regularly once daily. No sore throat. Eyes and ears negative.

Physical examination: Frame short and heavy. Nutrition above par. Muscles soft. Skin negative. Lips a trifle cyanotic. Joints normal. Superficial glands are not enlarged. Tongue is coated. Thyroid negative. In upright position patient shows difficulty in breathing. Chest is well formed. Expansion limited. Percussion gives poor resonance over both lungs down to the fifth rib anteriorly. Posteriorly the resonance is fair below the scapula. Respiratory sounds are rough. Congestion over both hiluses and to less extent over both lungs. Apex beat is not seen or felt. Cardiac dullness difficult to obtain. Heart sounds are distinct. No definite murmurs or accentuations. Abdomen is normal in contour. No localized tenderness or rigidity. Liver and splenic dullness are normal. Reflexes are present.

Laboratory findings: Urine negative. Blood count: Red cells, 5,310,000; white cells, 5,700; hemoglobin, 80. Non-protein nitrogen and blood sugar normal.

Fluoroscopic: Right diaphragm free. Left diaphragm higher than right and moves slightly. Left lung is almost obliterated by dense shadow which reaches the costal border from the diaphragm to the first interspace. The mediastinum is pushed over to the right. Right lung is clear. Left border of heart is not seen.

Stereo plates: An opaque shadow practically fills the lung roots with the exception of a slight border of pulmonary tissue, more extensive in the apex and base. This mass of density practically reaches the pleura about the mid-axillary line. On the right side it extends into the lung from the mediastinum and obliterates all the markings of the lung root. The line of demarcation is very distinct between pulmonary tissue and tumor and runs vertically from the inner third of the clavicle to the corresponding point on the dome of the diaphragm.

Stereo plates one month later: The mediastinal shadow has not changed much under deep radiotherapy. There is now a very huge massive shadow showing that the tumor is causing extensive pressure in both directions. On the left it extends out to the pleura throughout the middle half of the lung. On the right side there is a distinct line of demarcation between the pulmonary tissue and the tumor mass which runs down the middle of the lung area in a vertical position. The patient died one week after the last plates were made, but no autopsy was obtained.

CONCLUSIONS

1. Sarcoma of the mediastinum though rather rare, is not uncommon and should be more frequently considered.

2. The prognosis is unfavorable because

diagnosis is usually not made until late in the disease.

3. Various treatments have been conscientiously tried out, but with very little if any results except perhaps to retard the progress.

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THE PRECANCEROUS CERVIX*

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The term "Precancerous" is employed with no apologies or qualifications. The ghastly increase in the incidence of cancer in the United States calls for emphatic and impressive terminology to describe any tissue which exists as a malignant potentiality.

Precancerous tissue is a structure in which, as the result of injury, infection, or chronic irritation, cancer is known to habitually occur. The gross visual diagnosis of early malignant disease will never be possible to an extent sufficiently great to eradicate the disease before lymphatic involvement has taken place. An anticipatory diagnosis of malignancy in a structure, commonly subject to this pathological change, assumes a precancerous state based upon conditions, indisputably the forerunner of this disease.

Less than 50 per cent of all cancers of the uterus are operable. Nearly 90 per cent of all cases of uterine cancer originate in the cervix. The seat of the growth may be in the vaginal mucosa of the cervix, or in the Cervical canal or its adjacent glands. Only 3 per cent of cervical carcinoma develop in nulliparous women. Ten thousand women in the United States die each year of carcinoma of the uterus. Three-fourths of the cases die within two years, and one-third within one year after the onset of the disease.

The prevalence of cancer of the uterus is estimated to be increasing at the rate of about 2.5 per cent per year. The Census Bureau in 1922 reported that about 24 per cent of deaths among women during that year were from cancer of the uterus. Bland has stated that within the past forty years, the deaths from uterine cancer have doubled.

Carcinoma of the cervix (uteri) is a disease of middle life, the greater number of cases occuring between the thirty-fifth and forty-fifth years. Clinically the first six months of the disease are without symptoms or signs, and since it appears about the time of the menopause, menstrual disturbances are common, and in many cases at the onset, the symptoms are attributed by the patient to the beginning of the menopause and are usually considered unimportant.

Many lives could be saved each year, if in the course of the physical examination of every female patient between twenty-five and forty-five years of age, a careful visual inspection of the cervix supplemented the digital examination of this organ.

In a case in which it is noted that the cervix is nodular, infiltrated, and enlarged, with a denuded ulcerated surface, or a proliferating finely granular surface, both of which bleed on the slightest touch, the presumption that malignancy exists is justified.

In the advanced case, with markedly increased vaginal discharge, changing from mucoid to watery type ,or with sudden severe hemorrhage, attention is drawn at once to the possibility of carcinoma of the uterus. Prolongation of the menstrual flow or increased frequency of the menstrual flow, are also suggestive of the presence of the lesion under consideration.

When, in the presence of one or more of these symptoms, there is found at examination, definite gross pathological evidence of carcinomatous degeneration of the cervix with lymphatic invasion, and incurability in the vast majority of cases; the diagnosis at this stage of the disease is a reproach to the medical profession, and treatment is invariably futile.

Cancer of the uterus can be said with certainty not to exist, if the cervix is the seat of numerous cysts.

If uterine scrapings are examined in the fresh state, and are found to be smooth, reddish or brownish and glistening, the condition is practically always benign. On the other hand if the scrapings are whitish or grayish and granular, or resemble brain tissue, the condition is practically always malignant.

Epithelioma is not found in an eroded cystic cervix, or in the cervix of a prolapsed sclerotic uterus. (A. C. Broders Mayo Clinic).

Cancerous invasion of the lymphatics means incurability of the disease; although the defense set up by the lymphatic chain of nodes draining the involved area may prolong the ultimate dissolution of the patient. Little nodes of fibrous tissue containing only a few cancerous cells may escape detection in roentgenograms of the lungs. (W. J. Mayo).

An early squamous cell carcinoma of the cervix was accidently discovered by Cullen, when the body of the uterus was being curret-

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ted for hemorrhage caused by hyperplasia of the endometrium, and by a small submucous myoma. The scrapings showed very early malignant disease accidently discovered, and a second currettment sustained the microscopic diagnosis of cancer arrived at when the first scrapings were examined. Radical extirpation of the organ affected a cure, and saved this patient a dreadful death.

Lewis, in Baltimore, some years ago, amputated a cervix uteri, and serial sections showed early carcinoma present in the tissue. The area of excision had removed the entire growth before metastases had taken place, and in this case the patient was saved.

A case recently came under my observation of a woman of fifty years passing through the menopause. Examination revealed a hard, nodular, indurated cervix, bleeding readily when touched with cotton. Fifty milligrams of radium were applied for 24 hours. The local evidence of correct application of the radium to the cervix and contiguous vaginal wall was indisputable. Six weeks later, the tissue under suspicion was more suspicious than ever. The paient was urged to have an immediate surgical removal of the organ. She consulted another physician who concurred in the diagnosis and advice given, and promptly amputated the cervix. The histological study of the sections of this tissue did not reveal malignant disease. This evidence in no way controverts the belief that early cancerous growth was not rendered innocuous by preliminary radium treatment.

The sacrifice of a potentially and grossly appearing carcinomatous cervix in this case carries with it no inconvenience to the patient and should be the attitude taken where "watchful waiting" may carry into the case an indictment of professional responsibility amounting to cruel negligence.

The employment of a follow up system, periodically tracing every female patient of the cancer occuring age and subjecting her to bi-annual examinations, and ruthlessly sacrificing any or all suspicious tissue, (cervical) will be a great step taken to break the strangle hold which cancer of the uterus is maintaining and tightening on all civilized society.

Early diagnosis, and complete and thorough eradication of the disease under discussion; is our only hope for the future. The removal, occasionally or often, of suspicious non-malignant tissue need occasion no reproach on the operator's part.

It has been wisely said that "It is a safe rule to always assume malignancy until the contrary is proved." (Howard Kelly).

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A MASTOID CASE WITH COMPLICATIONS

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Mr. E. B., aged 58, entered the hospital on July 16th, complaining of some pain, swelling and tenderness below the right ear, associated with a rise in temperature. About six weeks previous he began feeling badly, being weak and tired and having a lack of endurance. This progressed gradually and his family physician advised the extraction of his teeth, which were in an extremely bad condition. This was done, following which he was confined in bed with symptoms of generalized absorption and toxemia. As he complained of a diffuse indefinite pain and soreness in the right side of the head and neck, he was examined for a possible sinus infection or mastoid involvement. The sinuses were found to be normal. Both ears were found to be the seat of an old chronic exhaustive otitis media which the patient stated had been present since early childhood. The hearing was greatly impaired, but as the examination was made in the home, the functional tests were not made. The fundi of both canals were slightly moist, but no purulent discharge was present. There was no tenderness or swelling over either mastoid, but on the right side there was a definite tenderness just below the tip of the mastoid process, extending downward along the muscle sterno-cleido-mastoideus. There was no swelling and the tenderness, which was only slight, was thought to be the result of infection from the infected teeth which had been extracted a few days previous to the patient's admission to the hospital.

Upon entering the hospital the patient had a temperature of 99, with a pulse of 128, and appeared to be very seriously ill. There was a fairly profuse, very foul smelling discharge from the right external auditory canal, with definite tenderness over the mastoid process, especially at the tip. A hard, firm, nonfluctuating, slightly tender mass, about the size of an egg, was present just below and behind the angle of the right jaw. The leucocytes were 19,200, with the polymorphonuclears being 85 per cent.

An operation upon the mastoid was done on the day of admission to the hospital. The mastoid process was found broken down and filled with very purulent, foul smelling pus. The bony covering of the lateral sinus had necrosed away, the sinus being covered with pus and granulations. In removing these the wall of the vessel was niched with the curette. Bleeding was extremely free, thus proving that no thrombosis was present. The enormous broken-down mastoid cavity was thoroughly curretted, but a radical operation was not performed, owing to the extremely poor condition of the patient.

The post-operative course was uneventful for the first week, when suddenly the temperature rose to 102.5. It fell to normal the next day, but went up again each day for the next two days, each rise being preceded by a chill. It was then normal for two days, when the patient had another elevation, this time to 103.5. No chill preceded this elevation. Of course, an infected sinus thrombosis was thought of in connection with these changes. The leucocytes on two successive days were 9,500 and 10,000 respectively.

with 85 per cent of polymorphonuclears. The patient did not appear ill, nor did he have any toxic appearance. About the time of the last rise in temperature a large, firm mass about the size of an egg appeared below the ear and behind the jaw, very similar to the one that was present previous to operation, but which had since disappeared. Pressure on this caused much pus to be expressed from the mastoid wound. Hot fomentations were applied and the mass gradually subsided without incision, the contents draining out through the incision above.

Simultaneous with the rise in temperature and appearance of the mass the patient began to complain of a feeling of fullness in the throat and difficulty in swallowing. Inspection revealed all the soft tissues of the throat and palate markedly water-logged and edematous. This condition was apparently due to pressure on the veins along the neck by the deep seated indurated mass mentioned above. The edema readily subsided upon the disappearance of the mass. Repeated examinations of the urine were negative. The blood Wassermann was also negative.

The functional tests of hearing following the operation reveal a totally deaf ear on the left side, and only a small vestige of hearing on the right. Both the C and C4 forks are heard on the right side only when struck forcibly. The hearing is improving gradually for the conversational voice as time goes on. There is no spontaneous nystagmus nor past-pointing. No nystagmus whatever is produced on turning in either direction with the head in various positions. No vertigo is produced upon turning, nor is any past pointing obtained, thus showing that the vestibular portions of both labyrinths are gone beyond stimulation.

At the time of this report, two months following operation, the wound behind the ear is practically closed, but the fundus of the canal still contains a small amount of purulent secretion with a slight odor. A radical mastoid operation may yet be necessary, but should be avoided if possible in order to preserve the vestige of hearing which is present only in the right ear.

CONCLUSIONS

This case is of particular interest because of:

(1) The slow gradual onset without any definite signs or symptoms of mastoid involvement.

(2) The sudden development of chills and fever, simulating a lateral sinus thrombosis, but which was due to a cellulitis and accumulation of pus deep in the tissues along the side of the neck.

(3) The marked edema of the soft tissues of the throat, due to pressure from the indurated mass.

(4) The findings obtained from the functional tests of hearing and the vestibular tests.

EUROPEAN IMPRESSIONS

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Harley Street

We call it the street of Life and Death,
Of quickening pulse, and bated breath;
For Hope and Suspense pace side by side,
And the portals of Fear loom dark and wide.

It is also the Street of tenderness,
Where kind eyes glisten at our distress,
For Knowledge and Skill and Sympathy meet
And hold the secrets of Harley Street.

—Beatrice J. McMuller.

Harley Street is called by the poetess the "Street of Life and Death," because in London Town, it is the place where all the great consultants of London live.

One of the joys of London is walking, making as an objective some point of medical interest, so I always go to Harley Street just because of its association. Other streets have an interest—at 31 Golden Square lived John Hunter, at 14 Hertford Street resided Edward Jeuner, and at 10 South Street, Park Lane West lived the "Lady of The Lamp" Florence Nightingale, the Mother of modern nursing. Then the hospitals of London would take many days to visit—all have interesting histories—St. Bartholomews, or "Barts" as it is called, has just been celebrating its anniversary with a huge fair to raise funds. Guy's Hospital was mentioned in the public prints the other day under the following heading: "Guy's Hospital was the first place in England where clinical instruction was given—1723," and then followed the paragraph concerning the founder:

GUY'S HIDDEN TOMB

The tomb of Guy, founder of the London hospital bearing his name, is to be reopened for public inspection.

Guy was buried in the crypt beneath the chapel of the hospital, but as the only means of reaching it was through the matron's kitchen, very little public interest was taken in his resting place. A new entrance has now been provided by the hospital authorities.

In addition to Guy, William Hunt, who made a handsome bequest to the hospital 100 years ago, was buried in the crypt. He was interred there at his own request, in order "to rest as far as possible from the villain, my brother."

The Hunterian Collection in the Royal College of Surgeons should be seen by all visitors—beside the Hunter Collection there is a very fine series of pathological specimen from the great war. The building of the Royal college of Physicians is open to physicians, and on the Strand is the home of the British Medical Association. London as a postgraduate center is growing in importance, due to the work of the American University Union in Europe. There is now, as a result of cordial co-operation of the profession in London a well developed organization for postgraduate work.

The address is:

Post-graduate Medical Association,
No. 1 Winpole Street, London, W. I.

Secretary: Miss M. A. Willis.

The office is in the building of the Royal Society of Medicine, a beautiful and extremely well equipped institution with lecture halls, laboratories and rest rooms for the comfort of its members. To my mind this building is an example for all ambitious medical societies to copy. At the office, one can obtain for six pence a "Bulletin" of the different courses. There are many supplementive courses posted on the bulletin

board. The report shows an average of 160 P. G's in London last year. The chairman of the association is Sir W. Arbuthnot. The medical schools in London and the hospitals admit holders of the P. G. tickets to their general practice including clinical intsruction in the wards and outpatient departments, clinical lectures and demonstrations. PM. demonstration, etc. at the rate of one month £6, or $30.00, two months, £10, or $50.00, three months £13, or $65.00, six months £18, or $90.00, and one year £20, or $100. Courses can be arranged in almost any specialty including tropical medicine.

London is a wonderful city and will in my mind soon become a great postgraduate center for English speaking physicians. There is no trouble on account of language as in the continent. The material and teachers are there, and all that is needed is correlation. Living in London is more expensive than Paris or Vienna, but one who settles down can be very comfortable without undue expense. Beside the medical work the time spent there can be made profitable in more than one way. In a cultural sense the limit of possibilities depends on the individual.

We now pass over the English Channel, and make our way to Paris.

PARIS

Paris hasn't the vogue with American doctors that Vienna has. Before the great war there was no definite effort made on behalf of foreign physicians desiring advanced work. Now the French government through its control of the medical schools and hospitals has established what is known as the "Association Por Le Development Des Relations Medical entre La France et Les Pays Allies Ou Amis." The headquarters are located in the L'Ecole De Medicine.

Address—De Renseignements (Information Office) Salle Beclard, Faculte De Medecine, Paris.

Here between 9-11 a. m. and 2-5 p. m. there is in attendance an English speaking secretary who will supply you with programs of lectures, lists of hospitals, clinics, give you a map showing where the medical institutions are located and any other needed advice.

In the official list are noted thirty-five hospitals many of them named after famous French physicians, such as Hospital Laennec, after the man who introduced the first stethoscope, Hospital Claude Bernard, after that great student of metabolisin, the father of our modern internal secretions and ductless gland therapy, Hospital Broca after the founder of modern brain surgery, Clinique Tarnier after the obstetrician and originator of the axis traction forceps, the Institute Pasteur and others. This to my mind is a fine idea perpetuating the memory of the great men of medicine. Whenever I go to Paris one place always claimed a visit—the Morgue—that queer old building back of Notre Dame where the dead lay exposed to the morbid curiosity of seekers. This time the old building had vanished. Soon is to rise in its place a fine institute for medco-legal work which will be the most complete in the world. The French and Austrians have been the leaders in scientific medco-legal work along criminal lines, and this new institution will offer opportunities for postgraduate institution in this most important work.

In Paris there are excellent opportunities for work in nervous disease, internal medicine and dermatology, also in X-ray work.

Along these lines there is issued by the "Faculte de Medicine of Paris" for the year 1923 a supplemental course, a list of which is given in a pamphlet entitled: "Cours Complementarie et de Perfectonnement," that is really P. G. work in surgery, medicine, obstetrics, gynecology, etc., at the special hospitals devoted to these subjects. They are definitely outlined courses lasting as a rule for two months, limited as to number of students. Cost 150 francs per person or about $9.00 at the present rate of exchange. Paris of course is a delightful city to live in. Prices are a little higher than Vienna, but not so high as London. Talking with a young physician from Philadelphia who was doing neurological work at the "La Salpetriere," he said his total living expenses were about $10.00 a week.

The hospitals in Paris can easily be visited by obtaining a permit from the chief of police. All are under government control—many of them are very old buildings but some have excellent equipment. Visitors are cordially received. There are several very interesting museums like Charcot's at old "La Salpetriere" where you can see his library, his original manuscripts and drawings. The Musee Dupuytren tucked in behind the medical school with its association of the great French surgeon whose life reads like a romance. From a poor boy he rose to be chief of Hotel Dieu and died a millionaire and a Baron of France. The fine collection in the Musee d'authropologie and the little Musee Orfila where there are a lot of old surgical instruments including those used for the autopsy of Napoleon.

A knowledge of French is highly desirable, as little English is spoken in France or in the French hospitals.

SWITZERLAND

Now we board the train and go via Switzerland to Berne, its capital, where Kocher holds forth in the Spital doing his great work on goitre, to the Republic of Austria, stopping on our way at the quaint old cities of Innsbruck and Salzburg. At Salsburg is buried in the old church yard the founder of chemical pharmacology and therapeutics —Aureolus Theophastus Bombastus von Hohenhien or Paracelsus. To music lovers Salzburg claims attention as the home of Mozart, the famous composer. Leaving Salzburg we ride for eight hours through the beautiful scenery of the Austrian Alps and arrive at Vienna, or Wien as it is is called in German.

VIENNA

For many years Vienna has been the Mecca for physicians seeking postgraduate work in Europe, and justly so. The American Medical Association of Vienna with its headquarters in the Cafe Zur Klinik IX Wein, at the corner of Spitalgasse and Lazarettstrasse has a complete organization for taking care of the medical men seeking information relative to postgraduate work. To anyone thinking of doing work in Wien I strongly advise the obtaining from the secretary, Mrs. E. M. Kreidl, a copy of the "Blue Book," price $1.00, issued by the association. This book is a veritable mine of information giving a list of courses, with teachers, hours and prices, hospitals, a plan of medical Vienna, a short historical resume, lists of hotels, pensions and rooms, in fact—it is a complete Baedeker to Medical Vienna.

Brush up on your German before going over. Of course there are teachers specializing in medical German but that takes time. While many excellent courses are given in English—a glance at the University lecture schedule will show that much of the best work is given in German.

I quote from the Blue Book—"Vienna is not a short order establishment." A stay of six months or over has as many advantages over a hurried trip as a leisurely dinner has over a rush order of "Coffee & Pie." The latter is neither palatable nor sustaining. Many come here with the impression that living in Austria is very cheap. This is not exactly true. Things are less, but the cost is increasing. Prices for courses are in American money and vary from $3.00 to $5.00 an hour in small groups.

One thing struck me rather forcibly, that July and August are not the best months in which to do P. G. work in Europe. Many of the leaders are away on their vacations and the work is at its lowest ebb. Of course, I do not mean to say that there is not real work being done but it is mostly by assistants. You will be heartily welcomed in Vienna, for beside the medical work Vienna is a most fascinating city with its opera, theaters, wonderful museums, monuments and palaces, its Ringstrasse lined with shops and its population of kindly people. One enjoys not only a postgraduate in medicine but in all the other things that make life worth living. One day I went to Prof. Frankel's laboratory. He asked me where I lived. "In Detroit." "Oh, then you know my friend Dr. Davis, the pathologist." I was only too glad to say that I counted Dr. Davis as a friend. This served as an introduction. He invited me to attend his lecture, took me to the clinic, and altogether I had a most delightful three hours with this great teacher. He told me to give his love to Dr. Davis and to say that he hoped to come to America again, and give a series of lectures—one session to be in Detroit. If he comes I know one who will be in attendance. Prof. Frankel speaks excellent English and is a great admirer of America. In the Clinic I saw several operations—some were done under spinal anaesthesia which is extensively used in the Peham Clinic, others under general and a curettage without an anesthetic. Some operators wore no gloves, some cotton and one rubber. One gynecologist did an exploratory laparotomy and finding the condition in the bowel, immediately sewed up the wound and referred the case to the surgical section.

Leaving Vienna we journeyed to the south tot the beautiful Salzkammergut region in Styria where we spent three delightful weeks. I was greatly surprised at the large number of cases of goitre called by the natives "The Styrian Collar" or "Styrian Neck." Post in his book "Pathological Physiology of Surgical Diseases" mentions on page 345—in an article on the "Thyroid Gland" that Kutschera working in Styria found that although certain houses were supplied by water from the same source, some of the inhabitants had goitre and others none. He showed how little the water theory applied. He tells about the "Goitre Houses" which are still spoken of by the inhabitants of Styria. In Switzerland there is also a striking number of goitre cases but it seemed to me I noticed more in Austria. Oswoold—Post again—page 346 says that in 84 per cent of the inhabitants of Switzerland the thyroid gland has a greater weight than in regions free from goitre.

Along this line there is an interesting

story of the Cretins in the novel by Honore Balzac entitled "The Country Doctor."

Besides the hospitals and clinics there are the spas or "Bads" which are of special interest to the medical man. In passing I wish to say that in Europe there is vastly more attention given to the question of climate, diet, baths, use of sunlight and other natural methods of curing disease than in this country. The psychology of the health resort in such towns as Bad-Aussee, Bad Ische and Baden-Baden in Tustria—Wiesbaden and Carlsbad in Germany, Evian and Vichy in France and all the other scattered through Europe has a tremendous value. This consists in not only the palatial and well equipped bathing establishments but in the Kurpark with its symphony orchestra, its fountains playing, people listening to the music and strolling about. Good opera and theaters and even the gambling places help to divert the mind and add in the cure. This idea of entertainment might with profit be carried out in our own Mt. Clemens for example.

SCOTLAND

On our way home we stopped for a short visit in Scotland. In Glasgow there has been established a central organization called "The Glasgow Postgraduate Medical Association" for the purpose of arranging, co-ordinating, and administering postgraduate medical teaching in Glasgow and the west of Scotland. General and special courses will be arranged and a comprehensive permanent scheme has been adopted. It is anticipated that Glasgow will become one of the leading centers of graduate medical teaching in the near future. The University of Edinburgh and its work is too well known to need any comment here.

DYSTOCIA RESULTING FROM PATHOLOGY OF THE SOFT PARTS OF THE GENERATIVE TRACT*

WALTER MANTON, M. D.
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The fact as to whether or not a lesion of the fleshy birth canal or of the soft parts contiguous to it, will cause obstruction at labor depends upon the position, size, consistency and mobility of the lesion. Treatment must be based upon what we find on examination. Our decision to interfere on discovery, at term or after the trial of labor, is of the same importance as our decision for procedure following mensuration of the bony pelvis.

*Read before Section on Gynecology—M. S. M. S., Grand Rapids, Sept., 1923.

It is not my intention to dissuss in this article, any tumors arising from the walls of the pelvic basin, or to speak of dystocia to dry labor, or to cite any of those rare instances where an adherent placenta praevia interferes with the progress of the presenting part. These theses are border line, and demand discussions in themselves. Proceeding from below upward, the obstructions which one meets, naturally occur in the following regions: The vulval, the vaginal, the cervical and region of the lower uterine segment, the fundal and the extrafundal.

In many instances the abnormalities include more than one of these situations. Under these circumstances the pathology will be discussed as a whole.

OBSTRUCTION TO LABOR OCCURRING IN THE VULVAL REGION

Where the lesion is of congenital origin, the closure is usually complete. (3).

Instances have been reported of coitus by urethra, one case in particular demonstrating two small sinuses leading from the meatus into a vaginal pouch (4). The child was born by Cesarean section. There were no other anomalies present. It is not very often that the hymen is tough enough to resist the fetal head. If there is an opening at all, and dilatation does not occur readily, incisions may be made freely to relieve such an obstruction. Much more common are stenoses of the acquired type. They may follow a vulvitis of gonorrheal or puerperal origin, from typhoid, small pox, scarletina, dysentery, dibetic urine, irritating discharges from fistulae, masturbation, violent coitus, actinomycosis, tuberculosis, all producing an ulcerous condition resulting in scar.(5). Individuals so affected reraly become pregnant, since coitus is impossible or difficult. The same may be said of neoplasms of the malignant type. I find no instances where such women have become fertilized. On the other hand, benign tumors (2) such as lipomas of the labia, have acted as blocks to the passage of the head. (Cysts are of frequent incidence. They are usually of the retention variety and may exhibit hyalin degeneration (2). In a patient of my own, first seen whhen three months pregnant, a submeatal cyst, which undoubtedly would have obstructed delivery, was discovered and removed. It measured nine centimeters by six centimeters.) Varices, edema, although often extensive, do not as a rule produce difficulties. Hematomas sometimes do. An active and extensive blood tumor may distend the vulva and require excavation before the delivery of the head can be achieved. In such instances there is no reason at all why the cavity cannot be closed by obliterating sutures following the third stage.

We now come to those vulvar atresias following operative procedures. Cases of acute closure have been reported (8) following stupidly given enemas where the nozzle of the syringe has perforated the cellular tissues, producing edema and requiring operative delivery. But by far the most common instances of obstruction from manipulation, follow too thorough repairs of previous lacerations (1). Care should be taken not to suture the levator too high, and to avoid doing extensive dissections which tend to reduce the amount of scar tissue. Especially must this be said of intermediate repair during the child-bearing period.

DYSTOCIA DUE TO OBSTRUCTION IN THE VAGINAL REGION

Due to incomplete fusion of the Muellerian ducts, septa more or less perfect sometimes divide the vagina. These are often associated with double uterus. The question as to whether or not they cause dystocia, depends upon their distensibility. Sometimes partaking of the normal elasticity of the vaginal wall, they are shunted aside by the head. Other times they become strapped over the vertex like a frenum and require clipping with the scissors before the head can descend. Somewhat similar bands occur as the result of trauma following previous difficult labors. These must be treated in the same way. Annular constrictions may require multiple incisions. In all obstructions, resistance to progress varies with the position of the lesion. They may produce imperfect flexion or lack of rotation, or they may deflect the occiput into the hollow of the sacrum (21). Membranous septa tend to break spontaneously; the fleshy ones, if they do not hypertrophy and soften, must be incised. Since the operation is simple enough, it is best to give the patient the trial of labor before interfering.

Orvosi (28), Morgagnee (22), Deveze (29), and others, report stenosis of the vagina due to extensive scars, where, in their judgment, Cesarean section was required. In most instances the scars involved the upper third of the vagina, where vaginal incision would be dangerous. The atresias resulting from inflammation, including the injection of escharotics, usually dilate during labor. The same infectious processes which produce cicatrices of the vulva, may also leave scars in the vagina. The resulting passage may be tortuous and hard and during labor must not be allowed to rupture from the pressure of the presenting part. Again dystocia may arise in elderly primiparae from lack of elasticity or in the apprehensive from spasm, or where vaginismus is present. In all these, narcotics and anesthetics, with or without manual dilatation, may be tried. In this place I should like to impress the importance of the bladder and the rectum, in relation to the vaginal tract. If either one of these visci is distended by its respective contents, difficulties of engagement may occur, or even arrest of the head in mid-pelvis. In the case of multiparae with cystocele or rectocele, which have become filled and pouched across the passage. Vesical calculi, while not causing obstruction, as a rule, do an inestimable amount of damage to the bladder (19) by impingment of the head. On the other hand, carcinoma of the rectum often causes obstruction. During pregnancy its growth is rapid, so that if the condition is operable and discovered in the early months, abortion should be performed, followed later by a radical operation. If inoperable, pregnancy should be allowed to continue and a Cesarean done at term (18).

Masses encountered in the vagina include hematomas, which must be evacuated, and cysts, myomas and fibromas, which should be treated prophylactically. The latter consists of variable amounts of smooth muscle bundles with connective tissue and tend to hypertrophy and become edematous during pregnancy. In a series of cases collected by Guder (11) four were removed before labor, one before birth, followed by spontaneous delivery, one patient delivered herself normally in the presence of the tumor. There were three forceps, two versions, one breech extraction, and three Cesarians.

Although primary malignant disease of the vagina is rare, (12) it most often follows injury with or without repair, and since injury in this region is common, one wonders why the condition is not more frequently encountered. Rhodes collected twelve cases, of which only two gave birth spontaneously. The diagnosis of this condition is easy, the disease progresses rapidly during pregnancy, and the prognosis is bad. Certainly in no instances should the child be delivered through the birth canal.

LESIONS ARISING FROM CERVIX AND LOWER UTERINE SEGMENT

Much more common than malignant disease of the lower tract is cancer of the cervix, both of the squamous and adeno type. The first delivery makes every woman a potential candidate for the disease in this region (39). Yet few cases of pregnancy at term in the presence of cancer have been reported. Apparently malignancy hinders impregnation, but when this does occur, it is said to rupture the membranes early in most instatnces (40). Moreover, as a rule, these patients are too old to be subject to pregnancy. It is estimated that pregnancy with cancer occurs about every 2,000 times. According to Shoemaker, a cervix so affected shows no tendency to dilate or flatten during labor. Because of this, and of the chances of dis-

semination of the tumor cells through pressure, it is sound dictum not to permit labor to occur (32). In the event that the cancer is inoperable, pregnancy should be continued in the interest of the child (36). If the condition is discovered in late pregnancy, and the minor extent of the growth permits operation, a Porro should be done (33). In the early months under the same circumstances, a Wertheim, without regard to the pregnancy, is indicated (33). Since cancer increases rapidly during gestation, such a case may become inoperable at term. It has been shown that the results of a radical operation upon the gravid uterus have been nearly as successful as upon the non-gravid.

The treatment of malignant disease of the cervix by radium is, perforce, in the experimental stage (4). Whether or not it has an untoward effect upon the fetus is not known. Field (38) reports of a patient who received 7,320 mg. hours of radiation, which dispelled a cancerous mass in the cervix, but left a trace in the vagina. She was delivered of a four-pound baby after normal labor, without hemorrhage or laceration. The child was said to be healthy at three years of age. There was a recurrence in the cervix following the puerperium. I do not consider, however, that this patient should have been allowed to deliver herself.

One other form of malignancy of the cervix and lower uterine segment is of interest, although of unusual occurrence. Chorio Epithelioma has been known to develop here during pregnancy and to have thus obstructed labor (64). It might be said that the commonest form of cervical obstruction arises from the presence of undilatable scar tissues. This accrues from the use of the cautery, silver nitrate, radical operations or amputations, from ulcers, from senility, from conglutination, from adhesions of membranes about the os, and from syphilis. Especially syphilis renders the cervix tough and undilatable. In conglutination of the external os, we have a disturbance of the circular fibres, which refuse to expand under normal conditions. Elderly primiparas are especially prone to exhibit this phenomenon. The os remains small with thin margins, and may often be sprung by fingertip pressure. Monchotte states that he has encountered undilatable scar tissues following a too vigorous curretment of the cervix. Any number of observers (74) report atresias following infection. Of the post-operative scars it may be said (71) that the dystocias are not so bad. if the incisions have not been carried to the vaginal vaults, or through the lower uterine segment. Experience has taught us that antero-posterior incisions yield the best cicatrix. Progress of labor may be held up to the point of sacculation of the posterior aspect of the lower segment, with the result that ruptures have been reported at this point (82). With the contraction ring continually rising and the lower segment thinning correspondingly, a transverse laceration is produced through which the fetus may be expelled. Obstruction due to scar is usually not difficult to handle in the vaginal portion of the cervical canal and delivery through the abdomen is rarely indicated. But treatment must be instituted and that promptly, both for the sake of the child the thinned-out uterine segment, and for the sake of the cervix itself, which may be torn off annuarly. One may dilate such cervix by means of the rubber bag, the hands, the Goodell dilator, by multiple incisions (taking care not to extend them too high), and by vaginal hysterotomy.

Another impediment to progress which the cervix offers is edema (72), This, of course, is evidence of disturbed circulation. Perhaps the head is arrested by some other cause, and, as a result, a cervical ring of edema is formed, which acts similarly to the well-known contraction ring. Aside from the fact that this pressure may bring about necrosis of the bladder or rectum, the immediate result is the arrest of progress. Such edema sometimes takes the form of pedunculated tumors (78) occurring on the anterior and posterior lips, of which the anterior may become wedged between the head and the vulvar ring. Obviously, this peculiarity arises from a head deeply situated, which cuts off the return circulation from the cervical region. It has been stated that deep infection with much scar produces a similar condition. The presence of edema, in short, calls for a trial of taxis or possibly incision between clamps, followed by an immediate delivery with forceps. Cases of prolapsus of the cervix, with accompanying prolapse of the bladder or rectum, must not be confounded with the above condition. Cases have been cited (73) where the external as has been projected four inches beyond the vulva, and where replacement has been impossible. In these instances, the head must be worked out with forceps, while taxis is applied to the extruding parts.

Formerly most cases of undilatable cervix were treated by vaginal hysterotomy, or by multiple incisions. Today there is a marked tendency to do the abdominal operation. Personally, I believe the best results would be obtained, if those cases which exhibited scar cervices, immobilized high, or cervices likely to produce hemorrhage—all other con-

ditions being equal—were delivered from above, while those of all other types were delivered from below. Naturally, the former cases would be rare. Dystocia, due to congenital malformations of the cervix are in themselves uncommon, for the uterine and vaginal mal-developments are more often at fault. But cases have been reported where the head was held back by a band crossing the vagina, i. e., a septum between two cervices, which required slitting, before the head could proceed. Also, I note an instance of absence of the cervix. The patient was delivered by Cesarian.

FIBROIDS ORIGINATING IN THE CERVIX AND LOWER UTERINE SEGMENT

These may be grouped under three headings: (1) Those which are sub-mucous and tend to be extruded in front of the head (81). Since women with tumors so situated are not to become pregnant in the first place, or to continue pregnancy in the second, such phenomenae are rare. (2) Those situated intra-murally which interfere with the dilation of the cervix, or if large enough, produce mechanical obstruction. (3) Those which lie sub-serous and which may be pedunculated or not. The more pedunculated, the better chance there is for dislocation upward, either by manipulation or by the upward pull of the lower uterine segment during labor. It may be said that those originating from the posterior wall have a poorer chance of rising from the pelvic basin, on account of the projection of the sacral promontory. Any and all of these tumors may produce dystocia, not only by blocking, but also by deviating the presenting part from its natural direction. Thus we have transverses and abnormal presentations. In former years, many Porro operations were done to alleviate these situations, but today a great deal of sound expectancy is exhibited by the obstetrician who understands that each case is a separate problem; that pedunculated tumors originating in these regions, offer chances of upper displacement, especially during labor (83); that tumors projecting through the external os, may be removed in many cases when partial dilation and descent has occurred (81) and that, at laparotomy following the delivery of the child, the interstitial tumors may be enucleated (67 and 89). All these procedures must be instituted in the light of their mechanical characteristics. We know that not only is the musculature of these tumors hypertrophied during pregnancy, but that they are vastly edematous, due to circulatory changes. We also know that they lie in a very vascular bed. If for any reason hemorrhage is likely to be dangerous, we must modify our operative methods. We must be most radical when the tumors are softened or necrotic.

DYSTOCIA DUE TO CONDITIONS OF FUNDAL ORIGIN

Patients pregnant exhibiting fibromyomas arising in the fundal region are encountered fairly often and usually this pathology is not inimical to smooth labor. The fact that pregnancy is more frequent in the third decade and the tumors in the fifth, is the principal reason why their incidence together is not more striking, although it has not yet been settled whether fibroids are responsible for sterility or a result because the man or the woman is sterile. Due to the invasion of the tumor itself into the uterine cavity, to adhesions, or to tortions of the uterus caused by adhesions, and to necroses, spontaneous abortion or premature labor, occurs in about 35 per cent. Possibly reflex contractions of the uterine muscles also contribute to these early terminations of the pregnancy. Many patients continue gestation without incident, others suffer abdominal pain, or if the mass is situated near the mucosa to a steady trickling of blood till term (87). If the woman comes to term the prognosis in labor depends upon the situation of the tumor upon its size and consistency and upon its degree of motility. Kelly and Cullen (90) report various cases which did and did not interfere with pregnancy and which did and did not produce miscarage following the operations, when they were deemed advisable. Certain of the tumors undergo a hemolitic necrosis, the so-called red or carnious degeneration, which extends from the center of the mass to its periphery and may disintegrate, forming a cyst. It is therefore of prime importance that the consistency of all tumors be noted, because the rupture of such a cyst in labor might prove disastrous. Another reason for removing such a cyst upon discovery, is that it may develop some dangerous toxic substance. Granted that many fundal fibroids may be inocuous, that many of the submocou vsariety may be expelled before the descending head (93), they, nevertheless, require close observation. Lobenstein, in his collection of 100 cases, noted thtat 85 per cent came to term, with 75 per cent spontaneous deliveries. He therefore interferes operatively only for definite indications and may slough during the puerperium. Many labors (97) are rendered possible by the flattening of these tumors due to their softness. Fibroids often escape notice, or may be mistaken for parts of the fetus. Of 66 patients treated expectantly at the Mayo Clinic, ten had Ce-

sarian at term. Where ascension occurs, it happens three times more frequently from the anterior and lateral wall, than from the posterior wall, the latter tending to mobilize late during labor.

Soft tumors are said to ascend more readily than hard ones and this movement may occur, even if the tumor is closely united with the uterus. If the cervical ascent on the other hand is persistent, the prognosis is worse than if it tends to descend and approach the medium line. Therefore, according to Ballard and Dehan (100) the treatment of tumors should not be decided upon until labor occurs. Then if intervention is necessary it should not be delayed beyond three hours. It is interesting to note that the successful dislocation of a tumor by taxis, permits the cervix, which is pushed upward and out of the medium line, to descend into the middle of the pelvis (100). But certain operators condone this practice (102) since they feel that the trauma resulting may complicate the puerperium. A case (104) cited with multiple fibroids projecting into the uterine cavity and delivered by version, experienced an infectious convalescence during which time two tumor masses, weighing 500 and 800 grams were extruded. This suggests that manipulation from below is not without its dangers ,and I feel personally that, due to the uneven thickness of the uterine wall and its pronounced points of weakness, version is usually contraindicated. In the event that delivery from below is impracticable and that the conditions warrant a laparotomy, the question arises, what the procedure shall be. If the tumor cannot be shelled out from above, it is probably best to do a Porro operation in order to obviate hemorrhage or the chances of the tumor's becoming infected. All laporotomies upon patients with cystic or necrotic tumors should be done before labor begins. Marshall (111) divides all cases into three groups. Those for the trial of labor; those for myomectomy and those for the Porro operation. Hirst (114) considers the Porro operation indicated in all cases of multinodular fibroids. The procedure of diminishing the size of these tumors by irradiation, is still in the experimental stage. Evidence seems to show, however, that although the effort on the fibroid is favorable, it may produce abnormalities in the child.

The congenital anomalies of the uterus do not, by any means, invariably produce dystocia. In uterus unicornis, labor is possibly retarded by the oblique direction in the inlet, thus encountering the resistance which the presenting part is shunted toward of the opposite wall. Usually in uterus septus we get a vertex presentation and in bicornis with a common cavity breeches. In uterus introrsum arcuatus, the lateral expansion results in transverse positions especially, as this anomaly is usually accompanied by a short artero-posterior diameter. In the event that the uterus is double, the non-gravid organ which always partakes of a certain amount of enlargement, may obstruct labor, if it becomes prolapsed below the promontory into the pouch of Douglas. Uterus didelphys, comprehend two complete halves, bound together by connective tissue bands, and each having its own appendages, with two distinct cervices and usually a double vagina (107). Fifty-four such cases reported, had 64 pregnancies, only 41 7-10 of which resulted in spontaneous birth. Dystocia resulted from blockage by the non-gravid half and vaginal septa, as well as from incompetent uterine musclulative etc. When there is only a single cervix present in these fundal malformations, the condition usually escapes notice.

Displacements of the full term fundus causing difficult labor, may be either forward or backward. The latter anomaly is more rare since most patients abort. Due to the fact that there is excessive thinning of the anterior abdominal wall (which may mean rupture) and to the displacement of the cervix forward and high out of the pelvic brim, Cesarian is here indicated—the more so because of the unfavorable fetal position produced. Multiparae with pendulous abdomens or excessive diastases of the recti, may exhibit the fundus forward over the symphysis. Sometimes this occurs, too, through post-operative ventral scars (96-94-89). Such conditions respond readily to treatment. With the patient upon her back, a tight binder is applied from below upward, thus reducing the hernia and heading the presenting part for the pelvis.

Sometimes dystocia follows sacculation due to adhesions. These usually result from anterior abdominal fixation or suspension. It is a question whether or not suspension should be done upon patients during the child-bearing period. Unless such individuals are sterilized, since so many instances have occurred where the fundus has remained fixed during gestation, most frequently the posterior wall alone distends, throwing the external os above the promontory. Or both walls may hypertrophy resulting in a buckling of the anterior, thus dividing the uterine cavity by a crescentic fold (94). Of 359 cases of anterior fixation coming to term there were 20 Cesarians, 24 forceps, 1 destructive operation, and 3 ruptured uteri. There were 10 transverse

positions. In regard to vaginal fixation of the fundas, after the manner of Watkins-Werthein, a laparotomy is invariably indicated.

I. F. Stein (115) feels that Cesarian Section should be done for the benefit of the mother, with sterilization, even in the presence of a dead fetus. The picture here shows the undistended fundus at the level of the symphysis, the cervix pointing upward and backward and out of reach of the examining fingers, while the distended posterior wall is on the upper and anterior aspect. Hence, in doing hysterotomy the posterior wall is incised. The dystocia here is due, not merely to the position of the cervix, but also to the posterior sacculation of the fundus which in Stein's cases (4) produced three transverse positions and one breech.

DYSTOCIA DUE TO EXTRA FUNDAL MASSES

These masses may include dislocated kidneys, usually the right, or the spleen, but such obstructions are not of common occurrence. Nor is the ecchinococcus often met with, although (49) it may cause distention of a tube and therefore dystocia. It is most often an ovarian tumor which blocks the way. From the fact that these may rupture during labor, they should be removed upon discovery, the more so because it may be impossible to differentiate them from a dermoid cyst, rupture of which would be doubly dangerous, or from a malignant tumor. Even if the discovery occurs during labor, it is best to do a Cesarian and remove the tumor (45). Mechanically these cysts may do no harm, particularly if the pedicle is long enough to permit the rise of the mass from the pelvic basin. A tumor which prolapses, so that it becomes hooked under the promontory, is the least likely to become satisfactorily mobilized. The practice of puncturing an obstructing cyst, through the vagina (42), is to be condemned, since its contents are unknown and its escape into the peritoneal cavity might lead to infection or to dissemination of malignant material. The same can be said for forcible taxis through the vaginal vaults, in order to dislocate the pelvic mass. Williams (50) collected 107 cases of ovarian tumors complicating pregnancy. There were 47 cystic, 46 dermoid, 9 malignant, 5 fibromas and 2 colloids. The maternal mortality was 21 per cent and the fetal 50 per cent, but these figures, in the main, were collected before operative interference was usual. The diagnosis is made by the excessive enlargement of the abdomen beyond the duration of the pregnancy, by the presence of a mass in the pelvis or abdomen, detached from the uterus, occasionally by pain, and sometimes by symptoms of abortion. There is no doubt that fertility is markedly reduced in the presence of these tumors, especially if the growth is bilateral. The dermoids, which are next in frequency of occurance, usually have long pedicles. This permits early mobilization into the abdomen where bone and hair may occasionally be felt. The bony elements, too, may be demonstrated by the X-ray. The small solid tumors are said to be the most obstructive since they tend to stay fixed in the pouch of Douglas (53). The malignant tumors of the ovary fall more or less into the same category. According to Bey (60), all double tumors should be removed at once, since they are either papillary in type, or malignant. All of these extra fundal masses must be differentiated from the dilated bladder, sub-serous myoma, uterus bicornis, (53) and pelvic abscess (61). A case of the latter has been reported, upon which a Cesarian was done, after which the abscess was drained.

SUMMARY

Due to the legion types of lesion of the generative tract, it is difficult to formulate rules upon which treatment during pregnancy and labor may be based.

In general, it is safe to state:

1. That all hollow, or degenerated, or operable malignant tumors demand interference upon discovery without regard to the pregnancy.
2. That patients exhibiting one or more of the other lesions probably requiring Cesarian may proceed to term
3, That simple vulval and vaginal lesions may be taken care of during gesttion.
4. That border line cases may be given the trial of labor.

PATHOLOGICAL ACTION OF THE UTERUS AS A CAUSE OF DYSTOCIA*

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Any given uterus may be said to contract normally when in a reasonable length of time it can dilate the cervix, expel the products of conception and control the postpartum bleeding. The definition of what is "reasonable" from the standpoint of time is very elastic and varies in different individuals. For this reason it is extremely difficult to differentiate between normal and abnormal contractions. Usually, however, the normal length of labor is consid-

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ered to be from 18 to 24 hours in primiparae and less in multiparae dependent upon the lessened amount of birth canal resistance encountered. Also the secondary expulsive forces, that is, the adbominal and diaphragmatic muscles may lengthen or shorten the time of the second stage. If, however, in an otherwise normal labor the uterus fails in one or more of the above mentioned functions its contractile force may be considered inadequate and its action pathologic.

Pathological uterine activity may be divided into two main classes . In the first, and by far the most common, may be placed all cases of deficient uterine power or what is generally known as uterine inertia. In contrast to this is hyperactivity of the uterine muscle, either as a whole or in part.

For the sake of discussion, inertia may be divided into two groups. First, those cases in which at no time have there been present contractions of sufficient force to cause any material progress in delivery. To this type the name primary inertia has been given. Secondary inertia, on the other hand, is that condition where there is a pause or cessation in the contractions which up to the appearance of the inertia have been apparently normal.

As labor approaches, the obstetrician can with a fair degree of accuracy estimate the size and position of the child. Pelvimetry affords a method for approximating very satisfactorily the size of the bony pelvis. Vaginal or rectal examination will disclose scar tissue or obstructive tumors. In other words, the attendant may be fairly well posted on any probable cause of dystocia in a given case so far as the passage and the passenger are concerned. He is, however, left groping blindly in the dark when it comes to prognosticating normal or abnormal uterine activity.

A woman who has responded well to the work demanded of the uterus in one pregnancy is quite apt to do so in a subsequent one. But when attending a woman for the first time, who can say, "Her contractilc force will be normal and labor progress to a rapid, happy termination?" It is often the strong, athletic type of woman who, much to her own surprise, will have lingering, ineffective pains, while her weaker, less healthy sister will have no difficulty at all.

True, primary inertia is a rare occurrence. Many women have irregular contractions of the uterus for several days with little or no advance of labor. However, the majority of such cases, if left alone, will eventually exhibit a change in the contractions and later will terminate spontaneously. Are these cases to be considered cases of primary inertia, or are they merely manifestations of false labor? Undoubtedly the differential diagnosis is often difficult. The obstetrician is forced to realize, on the one hand, that a patient worn out physically and nervously by several days of aggravating pains, daily becomes a less good risk for operative interference while, on the other hand, he must admit the desirability of the procedure if a few days of waiting and encouragement will eventuate in spontaneous delivery.

Many authors have advocated the use of some drug, in an attempt to change false labor pains to true labor contractions. Ehrenfest used quinine for this purpose, finding that with this drug labor will be speeded up to a normal termination in the case of false labor while its effect on true primary inertia is practically nil. During the past year we have had several occasions to follow out this procedure in the Obstetrical Department of the University Hospital and have found it very efficacious in many instances. Other authors have used pituitrin. However, as a general rule, pituitrin should be reserved until after the birth of the child as its premature use even in small doses has proved to be dangerous to both the child and the mother.

The various etiological factors which have from time to time been ascribed to primary inertia are innumerable. The most common and seemingly logical ones have for their basis some pathology of the uterine musculature. Maldevelopment of the uterine muscle would fall under this class. Again, multiple, interstitial, fibroid tumors may so impair the contractile force of the uterus as to render its efforts at cervical dilatation comparatively fruitless.

I had the privilege of seeing during the past year a most interesting case of this type of inertia.

Mrs. R. C., Mult., age 30. Family and personal histories negative. Last menstrual period Jan. 30, 1922. History of a long difficult labor, finally terminated by manual dilatation and forceps extraction and complicated by an adherent placenta and postpartum hemorrhage. Pains started the morning of November 13th, 1922. They were frequent, but at no time did they seem to be especially forceful. Labobr continued in this manner for 33 hours, at which time the cervix was dilated only about three centimeters. In view of this fact, associated with the history of a different labor previously, the diagnosis of primary inertia was made.

Cesarean section was chosen as the preferable method of delivery. Upon opening the abdomen the uterus was found to be studded with many small multinodular fibroids. Following the delivery of the child, the uterus was extremely atonic and except for one severe contraction, following an injection of pituritrin, remained boggy. The uterine wound was closed, but the uterus refused

to contract, despite direct massage, applications of heat, and further injections of pituitrin and ergot. The uterine bleeding continued and the pulse rate rose to 150. At this point it was deemed that further delay was dangerous and a supravaginal hysterectomy and right salpingo-oopharectomy was done, and the bleeding controlled. Following this the patient rallied somewhat, the pulse became stronger, and she left the operating room in fair condition. Both mother and child made a good convalescence and were discharged on the twenty-second day.

Endometritis and metritis with scar tissue infiltration have also been known to so alter the uterine muscle as to render its contractile force inadequate.

Again, it is a well known fact that the contractions of a uterus overdistended by hydramnious or twins are very apt to be weak and ineffective.

On the other hand, as was stated before, it is impossible to prognosticate how any uterus will respond. There will always be those cases where no etiological factor for inertia can be found, yet where the uterus does not contract with sufficient force to materially advance delivery. It is this type of case that offers the greatest difficulty, not only as to the cause of the dystocia, but also as to the proper procedure to follow.

In general, expectancy and observation combined with supportive measures and encouragement, is the most prudent course. When, however, shall the line be drawn and operative interference be resorted to? Cragin advocates waiting until there is an indication that further delay will endanger the health of the child or mother. Danger to either is small as long as the membranes rupture long before complete dilation of the cervix is accomplished. The mother is then exposed to the dangers of intrapartum infection and the child to asphyxiation by a reduction in the size of the placentral area. With the appearance of danger to either of the patients interference is indicated.

The operation of choice depends upon the condition of the cervix, the presentation, position and the station of the presenting part.

Thus in a case of rigid cervix Cesarean section may be indicated. An example of this type of case has already been mentioned. On the other hand, if the cervix is easily dilatable delivery from below entails less risk to the mother.

An illustration of this condition is found in the following case which occurred recently at the University Maternity Ward.

Mrs. H. W., age 33, multipara. The family and past histories were negative. Marital history: One previous pregnancy. Labor very difficult. Uterus did not contract well and after two and one-half days of extremely painful contractions the child was delivered by manual dilation and forceps extraction. Some bleeding for five weeks following delivery. Last menstrual period April, 1922. Antepartum history negative. Examination on entrance showed a well built woman, heart and lungs negative. Pelvic measurements within the limits of normal, outlet relaxed. External os admitted finger tip with a moderate bilateral laceration of the cervix. Head engaging, occiput left posterior position. Contractions started about 11 p. m., January 28; very painful, although they did not seem to be extremely forceful. Morphine had practically no effect on the pains. Contractions continued at intervals of three to four minutes, lasting 45 to 60 seconds for about ten hours, when they became somewhat irregular, but still very painful. Rectal examination showed the cervix to have dilated to about four centimeters. Head slightly lower down, occiput still in left posterior position. Membranes intact. After about five hours, pains again became more regular, coming every three to five minutes. Suffering on the part of the patient was extreme. She continued in this manner for seven hours, or twenty-two hours from the onset of labor. Rectal examination showed practically no advance in dilatation. Despite the pain, at no time did the contractions seem to be strong. At this time the fetal heart rate was ranging between 140 and 170 and becoming of less good quality and slightly irregular at times. Because of the lack of advance, despite the seemingly painful but inadequate contractions and because of the history of a long labor previously, which necessitated operative termination, it was felt that one might be dealing here with a case of primary inertia. For this reason, and because of the rapidity and irregularity of the fetal heart, it was decided to deliver.

The patient was therefore anesthetized and the cervix dilated manually and a version and extraction performed. The child was somewhat asphyxiated, but was soon resuscitated.

The mother and child were discharged on the fourteenth day in seemingly good condition except for relaxation of the mother's pelvic floor and a bilateral laceration of the cervix, which was to a large extent present at entrance.

Manual dilation and version were chosen in this case instead of Cesarean section because it was felt that the cervix was dilatable and delivery per vaginum was the less dangerous procedure.

The danger of too great procrastination is well shown by the following example:

Mrs. L. W., age 23, primipara.

The past history showed the patient to have been treated for lues. Examination at the beginning of labor showed a slightly funnel pelvis. Head entering pelvis, position O. R. P. Cervix closed, but beginning to thin out. Labor began the evening of December 16. Pains about every five minutes, poor quality, lasting about 30 seconds. Continued in this manner until the next morning, when the pains stopped and she slept for five hours. The cervix was dilated about one and one-half centimeters at this time. Contractions as before throughout the rest of the day and that night. Examination the next morning showed the cervix dilated two centimeters. Patient very tired. She was given morphine and slept for eight hours, when pains continued as they had previously. Contractions continued in this manner throughout the day. The next morning, or 80 hours after the onset of labor, the membranes ruptured spontaneously and the pains returned, this time of slightly better quality. Examination that afternoon showed the head still not engaged, the cervix dilated about three centimeters. Contractions continued about the same throughout the night. The

fetal heart up to this time had been regular and varied between 120 and 140. The next morning the fetal heart began to go up to 170. There was some meconium in the vaginal discharge. The pains were no more effective and the cervix was dilated about four centimeters. The mother's temperature was 100.8, pulse 120 and of good quality.

Because of the lack of advance after five days and the fact that the contractions had at no time been of the strong effective type it was felt that we were dealing with a case of primary inertia. For this reason, and because the fetus showed evidence of asphyxia, it was decided to deliver.

In view of the seemingly undilatable cervix in a primipara, associated with a moderately funnel pelvis, it was deemed advisable not to attempt delivery from below. Low Caesarean section was chosen in preference to the classical method because of the long labor and premature rupture of the membranes.

The child was a male weighing seven and one-half pounds and was easily resuscitated.

The mother had a very stormy convalescence. The wound was infected. She showed evidence of an endometritis and later developed an infected thrombosis of the right pelvic vein and leg. She was finally discharged on the fifty-third day post-operative in seemingly good condition.

Here, however, it is felt that interference was delayed too long and that a more timely Cesarean section would have saved the mother much suffering and morbidity.

Secondary inertia in contrast to primary inertia is a relatively common cause of dystocia. While inertia may develop secondarily from any of the factors causing primary inertia it is far more often nothing but a tiring out of the uterine muscle. The musculature has acted normally and there has been progressive advance of labor up to a certain point. But here, due either to some associated cause of dystocia, or to a lack in the reserve power of the musculature, the uterus finds itself unable to further counterbalance the resistance offered and it gradually ceases to function as an expelling force.

The most common conditions which complicate delivery and lead to the development such as an occiput posterior position or a disproportion between the presenting part and the pelvis. These conditions, however, are to be dealt with in the following papers and need not therefore be discussed here.

It is the physiological property of any muscle to become exhausted, but it is also the physiologocal property of any muscle to recuperate under rest. If then, labor is at such a stage that no harm can come to the child or mother by rest, that is, if the membranes are intact and the presenting part is not causing pressure on the pelvic soft parts, the procedure is simple. The patient should be put to sleep by some suitable narcotic, morphine in one-quarter grain doses being very efficacious in this intsance. Thus the uterine muscle is allowed to recuperate and regain its tone.

If, however, labor has progressed to the stage where the presenting part is low in the pelvis and the cervix practically dilated, much harm can result to the maternal soft parts by allowing the presenting part to remain on the pelvic floor, even though the pressure caused by uterine contractions is neglegible. At this stage also definite damage to the fetus, as indicated by changes in the rate and rhythm of the fetal heart beat may result from a lessening of the placental circulation by contraction of the placental site. In such cases operative termination of labor is indicated, the choice of the procedure depending on the conditions present.

As was stated in the beginning, uterine contractions may err in either of two directions. Ineffective contraction, or inertia, has been dealt with. There remain to be discussed those cases in which the uterine contractions are too powerful, when there exists hyperactivity of the uterus.

Hyper uterine activity may manifest itself as a generalized property of the entire uterus or it may be confined to an isolated portion of the uterine musculature.

Rather arbitrarily, perhaps, a labor which results in the expulsion of child and secundines in less than three hours has come to be designated as precipitate labor. This condition is the result of hyperactivity of the entire uterine muscle.

In reviewing the last 240 cases at the Maternity Ward of the University Hospital this condition was found in 13 instances or five and one-half per cent. However, at least 6 of the 13 were known to have had effective contractions before pain was experienced. That is, labor had in reality begun. This would reduce the frequency to a little over two and one-half per cent. From these figures it will be seen that precipitate labor in its broadest sense is an infrequent complication of pregnancy. If we were to include only those cases where the uterus contracts with such force and frequency as to push the child through rather than between the pelvic structures, the occurence would be indeed rare. It is for the latter should be reserved. In this type of case such accidents as deep cervical and perineal lacerations, rupture or inversion of the uterus and injury to the child present themselves, but the over-powerful utérine contractions as a rule can be controlled by anesthesia, and counter pressure be exerted on the too rapidly advancing part.

Bandl first described the thickening of the muscular tissues at the junction of the upper contracting and the lower non-contracting portions of the uterus and this muscular ridge has, since that time, be-

come known as Bandl's ring. That it exists to some extent even in the easiest of labors may be shown by carefully examining this region immediately after the birth of the child, when it will be found to stand out as a more or less prominent muscular ridge encircling the junction of the upper and lower uterine segments. It is with this structure alone, or together with the rest of the uterine musculature, that the more serious types of hypercontraction dystocia are associated. But let it again be emphasized here that this type of dystocia is a rare complication of labor.

Harper has recently stated that three types of pathological contraction ring may exist, namely, tonic contraction ring, tonic retraction ring and isolated contraction ring or contraction ring dystocia.

The first of these, the tonic contraction ring, is associated with tonic contraction of the uterus. It is brought on by some extrinsic obstruction of labor, such as a contracted pelvis and, therefore, is the result of and not the cause of the dystocia. As this paper deals with the dystocia caused by abnormal uterine contractions it need not further be considered. Suffice it to say that it is the result of increased tonic contraction and thickening of the upper, with a compensatory thinning out of the lower uterine segment, and to point out that it is the only type of contraction ring which rises progressively from the pelvis toward the umbilicus as labor progresses.

In tonic retraction ring, on the other hand, the ring, together with the retracted uterus, are the cause rather than the result of the dystocia. By retraction is meant a state in which there is not complete retraction between contractions, the entire uterus being applied closely to its contents in a state of persistent retraction. Whether or not this retraction is due to over excitability of the uterine muscle is still an unsolved problem, but the fact remains that such conditions do exist and give rise to serious obstruction to the completion of labor.

The location of the ring is stationary and its relation to the fetus depends upon to what station the presenting part has advanced. Thus it may be either in front of the presenting part or around the neck or body of the child. In either case the ring forms an obstruction to further dilation of the cervix by preventing the lifting up of the lower uterine segment or, if the cervix be already dilated, to further advance of the child by contracting down tightly in front or around it.

The most characteristic symptom of this type of dystocia is pain in the lower abdomen, this being in contradistinction to the more usual type of pain in normal labor which is located toward the back in the region of the sacrum and coccyx.

Examination of the patient shows the uterus to retain its tone to an excessive extent between contractions, the child being palpable with difficulty. The lower abdomen is extremely tender to palpation, the cervix incompletely dilated and rigid. The ring is firmly applied to some part of the child and does not rise out of the pelvis. It can not therefore be palpated as a ridge or furrow running across the abdomen as is the case with the tonic contraction ring mentioned previously, but only by internal examination and even then with difficulty, but only by internal examination and even then with difficulty in those cases where it is formed above the presenting part.

Isolated contraction ring, on the other hand, does not show abnormality of contraction in the upper uterine segment other than some irregularity in the normal uterine action. Here the region of the ring is contracted in a hard, board-like ridge which may run completely or partially around the junction of the upper with the lower uterine segment, while the fundus shows complete relaxation between contractions. It is nothing more or less than a stimulation of the circular muscles of the uterus at this point. The primary etiology is as yet unsettled though faulty innervation and disturbed stimulation have both been offered as plausable explanations.

Where this condition occurs in the third stage of labor it may give rise to retention of the separated placenta and is better known, because of its suggestive shape, as hour glass contraction of the uterus. Many cases of hour glass contraction have been reported following the use of pituitrin and ergot during the second stage of labor. That the improper use of such drugs may give rise to this condition is borne out by the fact that they tend to cause hyper-excitability and contraction of non-striated muscle.

The most prominent symptoms of isolated contraction ring are atypical uterine contractions associated with absence of the progressive dilation of the cervix. The pain, unlike tonic retraction ring, is not constant, varying with the relation of the contraction ring to the presenting part. When above the presenting part the pain is usually increased while conversely when below the presenting part the latter has a tendency to be held up away from the cervix, thus reducing the pressure on the soft parts and lessening the pain. In many cases there is an associated pelvic hyperesthesia, vag-

inal examination being almost impossible without the aid of an anesthetic.

The cervix is usually well dilated. The membraines may be intact at first but usually rupture as the condition persists. A striking and almost pathognomonic sign, when present, is recession of a well engaged presenting part out of the pelvis and away from the cervix. In the ring in front cases, however, the ring may be palpated only with great difficulty as the examining finger is passed around the presenting part which is held firmly in the pelvis.

Inasmuch as these conditions are probably the result of over-activity of the uterine muscles, the most logical form of treatment is to obtain a thorough relaxation of the entire uterus. This may best be obtained by deep and prolonged ether anesthesia. Because of the tendency toward recurrence of the condition as the relaxing effect of the anesthesia wears off most authors advocate operative delivery while the patient is still under the anesthetic. A careful manual dilation of the cervix should therefore be attempteed after fifteen to twenty minutes of anesthesia. If at any time during the manipulation there is a tendency to contraction, operative procedure should immediately be discontinued until the anesthesia can be carried deeper, as further cervical irritation will only tend to augment the condition. The relaxation of the ring having been obtained by deep anesthesia and the cervix fully dilated, that form of extraction best adapted to the case at hand should be carried out.

Finally, in the treatment of either type of abnormal uterine contractions it must be remembered that the danger does not end with the delivery of the fetus. Bleeding from the opened veins of the placental site is stopped normally by definite uterine contraction and retraction. In inertia these properties are, to a large extent, lacking. There is no place here for a discussion of the treatment of post partum hemorrhage, but this complication should always be borne in mind during the intrapartum treatment of contractile pathology of the uterus.

DEEP X-RAY THERAPY IN MALIGNANCIES OF THE CERVIX AND UTERUS—PRELIMINARY REPORT

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The study of the effect of irradiation on deeply seated malignant tissues is becoming more and more important inasmuch as deep X-ray therapy is being advocated by many prominent radiologists in America and is extensively used in the place of surgery in some of the foremost clinics in Europe. In a few instances surgeons in this country have been induced to try high-voltage therapy in the so-called "operable" cases in the place of Wertheim statistics as recorded in 1912: "Six mented with X-ray treatment at a later time. Sufficient time has not elapsed as yet to determine the permanency of the results obtained from deep X-ray treatments in this country. The immediate improvement in most of these cases is very gratifying.

It requires no great effort to find many records of unfavorable results in cases where radical surgical treatment was instituted a very few days after the diagnosis of deep-seated malignancy was made. The percentage of cures five years after operation for carcinomas of the uterus is extremely small even in the cases which were considered operable. Davis of the Massachusetts General Hospital stated in one of his recent clinics that the Wertheim operation is one of great technical difficulty attended by a considerable mortality and frequently with annoying complications. He gave Wortheim statistics as recorded in 1912: "Six hundred seventy-five cases of radical abdominal hysterectomy were done with an operative mortality of 16.6 per cent and in 380 cases, 43 per cent were classed as cured after five years." The above records are for the operable cases. Surgeons find that less than 35 per cent of the cervical and uterine malignancies are suitable for operation. Of these, some surgeons state 30 to 35 per cent are clinically well five years after the diagnosis was made. This means that only approximately 10 per cent of all cervical and uterine malignancies are cured by surgical treatment. In deep X-ray therapy, we are not privileged to select our cases as being favorable or unfavorable from an operable standpoint. In fact, it is usually the hopeless cases that are referred for treatment. Seventy-four per cent of the cases which are being reported below are inoperable and are indeed very unfavorable cases from a surgical viewpoint. Twenty-six per cent constitute the operable and borderline cases.

In order that a comparison of statistics may be made between surgical cures and X-ray cures, the results of Zweifel, Doderlein and Wintz, who have been using deep therapy for a number of years, are quoted. Zweifel reports 35 out of 41 favorable cases, or 81 per cent cured and living five years after Roentgen irradiation for carcinoma of the cervix uteri was instituted. Doderlein reports 13 inoperable cases well after five years out of 214 inoperable cases which were treated. Wintz treated about 500 cases of carcinoma of the

body of the uterus and reports that 70 per cent show arrest of the disease four years after treatment. Forty-five per cent of the treated cervical carcinomas are living four years after treatment.

We do not wish to suggest that deep X-ray therapy should be substituted in the place of surgery in operable cases of carcinoma of the cervix and uterus before we can definitely show that this form of treatment is superior to surgery in the borderline cases. The X-ray therapist is anxious to treat every borderline case of malignancy without surgical treatment in order that trustworthy conclusions may be drawn from this form of treatment alone. For the present we feel that X-ray should be used as a supplement to surgery in the operable cases. There does not seem to be sufficient teamwork existing between the radiotherapist and the surgeon. This lack of co-operation is largely due to the fact that high-voltage therapy is still considered by many physicians to be a branch of experimental treatment which may never pass beyond the experimental stage. Even though our results may be very low when absolute cures are recorded in these inoperable cases, the immediate improvement noted in most of our cases and reported by many other radiotherapists places deep X-ray therapy as one of the foremost agents in combatting malignancy. We are tabulating the preliminary report of the result of treatment of 19 cases of carcinoma of the cervix and uterus treated with the high-voltage method in the X-ray department of the University of Michigan Hospital to emphasize the immediate improvement. Later we hope to present the permanent results and trust that some of these cases may be classed as cured after five years of observation.

The technique used in treating these cases is that recommended by Dessauer; the cross-fire method was used which enables us to get the proper depth dose without producing any skin damage. In dealing with carcinomas of the cervix and uterus, the diseased tissue is located approximately in the center of the body. Careful measurements were made of each patient and a cross sectional drawing was made to conform to the measurements. These outline drawings were then placed on the Dessauer charts and the dose was determined. As many portals of entry were used as was necessary to give the desired depth dose in the area of diseased tissue. It sometimes required as many as five points of entry to administer the proper depth dose. Extreme care was exercised in determining the depth dose as both over and under treatment causes serious damage. One must never overlook the fact that deep X-ray therapy is a potent agent which is capable of doing as much damage when improperly managed as good when properly controlled. High voltage produces rays of short wave length which have great penetrating power. Copper filters were used to absorb the rays of long wave length. It is the long waves or the so-called "soft" waves that act so readily on the skin, producing a skin erythema long before the deeper structures receive even a stimulating dose. Copper filter allows only the short waves to pass through them. By proper filtration, a homogeneous radiation is directed towards the diseased tissue. Secondary rays from the copper are absorbed by the aluminum filter.

PREPARATION OF THE PATIENTS

Before deep therapy is given, a complete blood examination is made, including a differential count. Patients are placed on a liquid diet twelve hours before treatment is given. This is done to lessen the nausea and vomiting which frequently follows long treatment. We have never given more than four and one-half hours of treatment in one day.

Following treatment patients are kept on a soft diet as long as nausea persists. Alkalies are prescribed when there is danger of acidosis from inanition or from toxemia from malignant degeneration. We have never had reactions severe enough to require blood transfusions or intravenous hypertonic saline solution, which many European therapists have recommended and used for the so-called "Roentgen Ray Sickness."

Some of our patients have had diarrhoea starting two or three days after treatment and lasting perhaps for a week. However, this has never been an alarming symptom and has been easily checked.

The high voltage treatment machine was installed in the University Hospital in January, 1923. The first uterine case was treated by this method January 25, 1923. Since then twenty-one uterine cases have been referred for deep Roentgen ray therapy, making a total of twenty-two cases treated by this method. Nineteen of these cases were referred from the Department of Gynecology by Dr. Reuben Petersen and his staff. The three remaining cases were treated as post operative out patients for referring surgeon and consequently no gynecological record was made.

Our records are based on the study of nineteen cases having complete hospital records. The following chart emphasizes the salient features of each case.

Case No.	Age	Clinical Diagnosis	Pathological Diagnosis	Extent of Lesion	Duration of Symptoms	Associated Conditions	Previous Operations	Surgical Treatment	X-Ray Treatments	Operable	Results and Remarks
8380	43	Carcinoma Cervix	Squamous Cell Ca.	Broad Ligament	3 Months	None	None	Cautery	Pre-Cautery 1/4 cu. 12-17-22 1/4 cu. 1-23-23 1/4 cu. 3-23-23 1/4 cu. 7-6-23 Deep Therapy	Inoperable	Clinically Cured. General Condition Improved.
2534	55	Carcinoma Uterus	None	Bladder Rectum	1 Year	Lues Latens	None	None	Deep Therapy 1-25-23	Inoperable	No Follow Up Report.
2549	42	Laceration Ca. Uterus	Advanced Medullary Squamous Cell Ca.	Entire Pelvis	About 2 Years	None	None	Cautery 1-2-23	Deep Therapy 1-30-23 3 hours 4-4-23 1½ hours 7-7-23 3½ hours	Inoperable	General Condition Improved—Able to do Own Housework; General Filtration of Pelvic Organs.
2563	33	Carcinoma Uterus	Sqquamous Cell Ca.	Broad Ligament	Unknown	Lues Latens	None	Cautery	Deep Therapy 2-2-23 3 hours 5-4-23 3½ hours 8-4-23 3½ hours	Inoperable	5-4-23, Clinically Cured—General Condition Improved. 7-31-23, Palpabble Lemon-sized Mass in Posterior Cul-de-sac.
2568	45	Fibroid Carcinoma?	Adec-CVarcinoma	Broad Ligament	4 Months	None	None	D & C	2-3-23 160 minutes 5-1-23 3½ hours 8-14-23 3½ hours	Inoperable	Condition about same. Pains stopped for a Month Following Treatment.
2575	51	Laceration Ca. Uterus	Advanced Medullary Squamous Cell Ca.	Entire Pelvis	1 Year	General Debility	None	Cautery 2-12-23	2-8-23 160 minutes 5-3-23 200 minutes	Inoperable	8-20-23, Progress Poor—Loss of Appetite and Loss of Weight.
2595	50	Carcinoma Cervical Stump	Medullary Squamous Cell Ca. Cervix	Apparently Limited	About 1 Year	None	Hysterectomy 14 Years Ago	1-30-23 Radical Removal of Cervix	2-14-23 3 hours 5-28-23 4 hours	Operable	5-25-23, No Signs of Malignancy.
2626	43	Laceration Malignancy?	Advanced Medullary Squamous Cell Ca.	X-Ray Evidence of Mass in Sigmoid	8 Months	Marked General Debility	History of Operation 6 Weeks Ago	D & C 2-20-23	2-28-23 4 hours	Inoperable	Gradually Getting Weaker—Hopeless Prognosis.
2628	31	Laceration Ca. Uterus	Advanced Medullary Squamous Cell Ca.	Entire Pelvis Uterus Fixed	1 Year	Lues CNS Nausea and Vomiting	None	Biopsy	3-1-23 200 minutes	Inoperable	Died 4-14-23. Gumma of Medulla. (See Discussion of Case.)
2631	62	Carcinoma Uterus	None	Entire Pelvis	3 Months	Secondary Anaemia	None	None	3-2-23 200 minutes	Inoperable	No Follow Up Records.
2753	43	Fibroid	Advanced Ca. Cervix	Limited?	No History	Vesicovaginal Fistula from Child Birth 8 Months Before	None	Panhysterectomy 3-27-23	4-16-23 4 hours 7-19-23 4 hours	Operable	Accidental Finding of Balignancy. Clinically Well 7-19-23.
2779	63	Carcinoma Uterus	Advanced Adeno-Carcinoma	Apparently Limited	1 Year	Goitre Persistent Thymus	None	Radical Hysterectomy	5-12-23 4 hours	Operable	Instructed to Return.
2781	34	Carcinoma Cervix	Vaginal Cuff Infiltrated with Carcinoma	Entire Pelvis	1 Year	None	None	Cautery 4-20-23. Radical Panhysterectomy 5-4-23	4-23-23 4 hours Post-Cautery Pre-Operative	Operable Borderline	No Records after Patient Left Hospital. General Condition Good when Discharged.
2832	60	Fibroid with Malignancy	Advanced Medullary Carcinoma	Apparently Limited	3 Months	None	None	Hysterectomy 5-1-23	5-11-23 200 minutes 7-11-23 200 minutes	Operable Borderline	7-11-23, Mass size of Grapefruit in Lower Abdomen. Apparently Extension of Malignancy.
2843	30	Advanced Carcinoma	Advanced Squamous Cell Carcinoma	Entire Pelvis	6 Months	Lues Latens? Wass. 2 Plus	None	D & C	5-17-23 200 minutes	Inoperable	Is to Return in Week or Two.
2871	48	Carcinoma Cervix and Uterus	None	Entire Pelvis	About 1 Year	Hemiplegia	None	None	5-29-23 4 hours 8-6-23 4 hours	Inoperable	No follow up record after 8-6-23, which reports friable tissue and tumor mass present on enterance has disappeared entirely. Some bleeding on examination.
2890	35	Carcinoma Cervix and Uterus	None	Entire Pelvis	About 2 Years	Lues CNS	None	None	6-5-23 4 hours	Inoperable	To Return for Examination in About 1 Month.
2989	34	Laceration Carcinoma Carcinoma	Advanced Squamous Cell Medullary Carcinoma	Entire Pelvis	6 Months	None	None	Cautery 7-30-23	7-11-23 200 minutes	Inoperable	To Return.
3022	27	Uterus Uterus	Squamous Cell Carcinoma	Entire Pelvis	2 Years	None?	D & C without Relief 7 Months Ago	Biopsy	7-30-23 4 hours	Inoperable	To Return.

Analysis of this chart shows that: Fourteen of nineteen cases, or 74 per cent, are inoperable. The remaining five cases, or 26 per cent, are operable. More than half of these operable cases are in reality borderline cases. Eighteen cases are living, one incurable case is dead and is worthy of a short discussion.

Case No. 2628, Mrs. B. Age 31, entered hospital Feb. 2, 1923; chief complaint, pain in lower abdomen and back, bloody discharge between menstrual periods for about one year. Has had many vomiting attacks during last year. Examination: Patient obese, anaemic; reflexes exaggerated; cervix presents a painful, friable mass which bleeds during examination; uterus and appendage not made out; discharge abundant and foul smelling. Hg. 28 per cent, reds, 2,200,000, Wass. 4 plus. Diagnosis of paresis made by Department of Dermatology and Syphology. We advised mild antileutic treatment and irrigations for the pelvic infection. Treated March 1, 1923, 200 min. Nausea increased a little following treatment for only two days, a week later the general condition improved, March 12 odor and bleeding stopped, Haemaglobin increased to 40 per cent. April 9th vomiting very severe, April 14th respirations ceased. Autopsy report:

Mrs. L. B.—Autopsy.

"Advanced scirrhous carcinoma of uterus with infiltration of all pelvic organs. Metastases to peritoneum, omentum and retroperitoneal lymph nodes. Irradiation necroses. Perforation of rectum. Syphilis (Lepto-meningitis, early paresis, gumma of medulla, active aortitis, hepatitis, pancreatitis). Chronic interstitial nephritis. Right sided hydronephrosis. Fatty cirrhosis of liver. Atrophy and passive congestion of all organs. Lipoidosis of adrenals. X-ray pigmentation of skin over pubis. Atrophy of carpal interossei. General cachexia."

Case No. 2575 returned to the hospital after the chart had been protographed. The improvement in her general condition was most astounding following the second treatment. She had gained about six pounds and complained of only a slight hemorrhage. Pelvic examination revealed a small crater formation in the apex of the vagina. This lesion bleeds when touched. There is no appreciable change in the induration.

Case No. 2871. Mrs. B., age 48. Referred for deep X-ray therapy May 29, 1923, with the diagnosis of an inoperable squamous cell carcinoma of the cervix with extension into the uterus, bladder and broad ligaments. Was given four hours of deep therapy. August 16, 1923, received two hours of deep therapy. Dose reduced 50 per cent because of the severe reaction on the skin from the first treatment. Vaginal examination at this time shows "soft tissue about the cervix contracted down or gone." Mass had disappeared. Bleeding followed the examination. Remarks: This patient is very markedly improved. She has gained weight and at the present would be considered as an operable case. Is the marked improvement in this case due to the fact that X-ray was used as the only therapeutic measure? It would be fallacy to conclude from this one brilliant result that every case of malignancy should be treated with X-ray alone. We are anxious to try irradiation alone on many of these cases so that our statistics may form the basis for some trustworthy conclusions. We should also like to give supplementary radium treatments to those cases which are now treated by irradiation alone, following the technique outlined by Schmitz of Chicago, who today is the outstanding radio-therapist in the United States on cervical and uterine malignancies.

CONCLUSIONS

A further study of the chart shows that eleven cases received only one treatment apiece, five cases two treatments, and three, three treatments.

The remaining cases on the chart are self-explanatory.

CONCLUSIONS

(1) Deep X-ray therapy, properly given, reaches malignant tissues beyond the reach of radium and surgery. When used alone or supplemented with radium treatment, malignant growths have been arrested for a period of five years or more.

(2) The percentage of four and five-year cures of cervical and uterine malignancies following deep X-ray therapy as reported by some of the early European radio-therapists places high-voltage therapy as an agent on a par with surgery. In fact, the statistics show that X-ray without surgery gives a higher percentage of cures than surgery without deep X-ray.

(3) In cases with a hopeless prognosis, deep therapy lessens pain, frequently checks excessive hemorrhage and foul discharge.

Many patients who are considered poor operable risks before treatment is instituted, improve to such an extent that the classification is frequently changed from inoperable to operable.

I wish to express my indebtedness to Dr. Reuben Petersen and his staff for the records which they placed at my disposal.

PYOGENIC GRANULOMA OF ETHMOID ULCERATING INTO ORBIT

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Direct ethmodial infection involving the orbit usually appears as mucocele, pyocele, or cellulitis. In this case the ethnoid cells and adjoining orbit were filled with a rather firm mass of necrotic granular material.

The patient, Margaret B., aged 8, of American parentage, came to this office in April, 1922, with a suppurating process in the right orbit of two months' duration. In the family history a great-grandmother died at 88 of throat cancer. A grandfather died at middle age from tuberculosis. The parents are living and well. She has always been a strong, healthy child, had measles, whooping cough, chicken-pox and influenza twice, an abscessed gland in the neck at 5 years, and a tonsil and adenoid operation was done soon after this. The result was good.

The present trouble followed her second attack of influenza. There were two weeks of intermittent pain, first in the right temple, then in the brow, then in the inner part of the orbit. Redness and swelling then appeared in the upper lid. This was poulticed for one week, then opened by the family physician and treated for about two months without benefit.

Examination showed both nares normal in structure and free from discharge. The right eye was closed and the upper lid red and swollen. There was a hard swollen mass in the naso-frontal region and

below this, near the inner canthus, were 3 or 4 sinuses discharging pus. There had been a tendency to heal, cicatrize and recur; a condition which is so often associated with tuberculosis and syphilis. The eyeball was normal, no diplopia and there had been no exophthalmos. Temperature, 99.4; pulse, 96; Wasserman negative. Blood count: White blood corpuscles, 7,600; red blood corpuscles, 4,000,000; Polys., 78 per cent; S. L., 18 per cent; L. L., 4 per cent.

X-ray report: Plates of head in postero-anterior position show impaired density over right ethmoid region. The bony structure in this area shows demineralization. There are no frontal sinuses present.

Diagnosis rested between a frontal or ethmoid condition with suspicion of malignancy. Tuberculosis, syphilis and actinomycosis should be considered and, in this region, meningocele or encephelocele should be thought of if there is swelling without redness.

Operation May 3, 1922. An external skin incision was made from the middle of the brow through the supraorbital nerve and periostium to a point below the anterior lacrymal crest. The periostium was elevated and the lacrymal sac dislocated from its groove. No landmark for the trochlear attachment was seen. The periostium was greatly thickened over the nasal process of the frontal bone. New bone deposit had formed, causing a protuberance. The probe could not be inserted into any frontal sinus. The os planum was about all gone, leaving a large cavity exposed to view, which was filled with necrotic granulation tissue, some pus, and broken down bony ethmoid cells. The lacrymal and nasal process of the maxillary bones were partially removed to get at the anterior cells and the entire ethmoid radically attacked, leaving the middle turbinates and nasal mucosa. A large punch opening was made into the nose in front of the middle turbinate, and an iodoform gauze drain inserted. A small drain was put in the external wound and silkworm sutures were placed through the skin and periostium.

Pathological report: Active infection with necrosis of granulation tissue. No etiological diagnosis can be made from the material.

Subsequent history and result: The wound healed in three weeks, partly by first and partly by second intention. There was great difficulty in keeping the wound open into the nose. This should have been made larger, but it does not seem necessary to remove the entire middle turbinate in these operations unless one is sure it is diseased. About two months later the patient returned with a recurrence and keloid growth in the lower part of the incision. Radium was now used over the skin wound, with a rapid disappearance of both tumor and keloid, so that after two months' treatment it looked as it does now, entirely healed. The structure of the interior of the nose remains perfectly normal; and also the eye muscle balance. Shell rimmed glasses can be worn later on to cover any remaining scar. Another X-ray, taken recently, shows still no development of the frontal sinuses and the effect of operation upon these cannot be told at present.

REPORT OF A FEW CASES WITH ENLARGED THYMUS*

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Enlarged thymus is by no means rare and frequently enters into the cause of death in various types of infections and surgical procedures. Some of our colleagues, on the other hand, think it is a very rare condition and that no general routine measure need be taken to rule out these cases. Personally, I feel that if some routine measure could be established to rule out these cases I am sure death rate in pneumonia and other severe infections would be materially reduced, especially among babies and children.

The thymus gland may take any one of three positions, namely; cervical, cervicothoracic, and thoracic. Probably the most common location is around the large vessels at the base of the heart or entirely thoracic position. When in this position it is never fixed since it will vary with each inspiration and expiration and to some extent with diastole and systole of the heart. On X-raying the normal chest we find a shadow just beneath the sterum in the upper part of the chest which is interpreted as the great vessels and mediastinal glands. Ordinarily, this is not much wider than the sterum. When this shadow is wider, such thing as bronchial gland, enlarged thymus, or some anomaly from the great vessels, must be considered. Now suppose you have a long, narrow, thick thymus which is entirely thoracic in position. It is perfectly obvious that any anterior or posterior view would not give any unusually wide shadow on the plate end, therefore, X-ray would probably be negative. Yet that case has an unusual amount of glandular material and should be considered enlarged thymus. X-ray men, no doubt, have such cases in mind for often the patient is X-rayed in lateral position. This technique, however, has not been entirely satisfactory.

As another hypothetical case, let us imagine the thymus no wider than the sterum but long and thick. A flat plate of this case, as mentioned above, would probably show a negative thymus. Now imagine an

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From the Department of Pediatrics and Infectious Diseases, University Hospital, Ann Arbor, Mich.

X-ray taken when the heart is in diastole or flattened out and the diaphragm is relaxed and down, namely at the end of expiration. It surely must be obvious to you all that there is a tendency to a lengthening out of the great vessels and mediastinal tissues. This picture would probably show a narrow thymus, in other words, negative. Should this picture, however, be caught when the heart is in systole, contracted and upright, and the diaphragm is contracted and up, corresponding to the end of inspiration, it must naturally occur to you all that the heart is pushed up and the mediastinal tissues above are pushed together, tending to broaden the shadows of the great vessels of the neck or what lies in front of them. This same effect can, of course, be produced by a distended abdomen, due to any number of causes. Furthermore, when the parts assume the latter position, the thymus is thrown nearer to the chest wall which certainly must have effect on the size of the shadow.

From this we see that an X-ray picture of the chest is not always conclusive in ruling out an enlarged thymus. I am sure after the following cases have been presented you will be convinced that the X-ray, although very valuable in making a diagnosis, is not infallible in spite of the fact that every precaution has been taken regarding points in technique referred to above.

Frequently thymic symptoms are present from birth or slightly after. The following case selected fro ma group will serve to illustrate the point.

Case No. I.—Baby F., aged 4 months, female. First seen in our Welfare Clinic June, 1922. The chief complaint at this time was that the baby choked easily. At first the mother noticed that this generally occurred while nursing, but recently the baby would wake up out of a sound sleep with a peculiar choking spell. This baby had never had any serious illness, but during the past winter has had frequent colds to the extent that it has been almost a continuous affair. Of late there has always been a tendency to develop croup with each cold. On examination we found an infant who looked perfectly healthy, perhaps slightly overweight. Neck was rather short, associated with a thick panniculus, particularly around shoulder and hip girdles. Tonsils and adenoids were moderately enlarged. Cervical and axillary glands were not unusual. Liver and spleen were not palpable. Musculature was flabby, color sallow. Baby had no temperature at this time, no evidence of a cold. Percussion of the thymus was negative. Examination otherwise negative.

The patient was immediately referred to the Pediatric Out-Patient for X-ray. X-ray in this case was unmistakably that of enlarged thymus. Following this the case was referred for X-ray therapy. The patient was treated once a week for four successive weeks. Improvement was noticed after the first treatment. After three treatments, all choking spells had disappeared. Three months after the first X-ray the patient was X-rayed again and plates were compared with the original ones. At this time X-ray showed the thymus had been very much reduced. Two months later this patient went through an attack of pneumonia without any difficulty.

Again, symptoms may never manifest themselves until after some serious infection, as illustrated in the following case.

Case 2.—D. H., aged 6 months, female. This patient was followed in the Welfare Clinic from shortly after birth until the present time. When I first saw this baby she struck me as being a thymic type, at least, her general build suggested it. In other words, she was a very short, chubby baby, with very short neck. On questioning the mother, she says this baby has never had any choking spells, attacks of cyanosis, difficult breathing or asthma, and so far has been perfectly well. For the first six months this patient was followed as a regulation feeding case and observed weekly. When six months old, the patient was brought in because of a severe cold. According to the mother, the baby had had a cold three or four weeks ago, from which she apparently recovered, when she was taken with the present cold. The mother was not alarmed about this cold, but felt that she wanted to get an early start on the treatment with hopes of shortening the attack.

Examination: She was a short, chubby, well nourished baby, apparently healthy except for an acute cold. Cheeks were flushed, probably due to temperature. Musculature was somewhat flabby. Tonsils and adenoids were very definitely enlarged, but the cervical, axillary and inguinal glands were not unusual. The throat was red. There was also a marked rhinitis associated with a temperature of 102. It was also observed on this visit that the baby had more or less difficulty in breathing at times and that a slight excess of mucous choked the baby easily. At this time the mother was requestioned for evidence of local symptoms of thymus before this attack. Results were negative. The case was discharged from the clinic with the instruction to have the doctor observe the case from day to day. On the following day the case was very much worse, temperature 103. There was definite dyspnoea, associated with a marked cough. Two or three times during the night there was a marked choking spell, associated with cyanosis. Rhinitis was very marked and baby appeared somewhat toxic, respirations were 36. Color was good, except when taken with an attack of severe coughing. The case at this time was treated from the viewpoint of a central pneumonia, although ausculatory examination was negative. On the following day she seemed to be in a very serious condition and the mother thought the baby was dying. Temperature at this time was 104.5 by rectum. The baby looked toxic and exhausted, seemed hardly to have energy enough to cough. Respirations were very rapid at times, other times would drop down to 25 per minute. More or less continually there was a tendency to choke. Ausculatory examination of lungs was negative. I watched the baby for 45 minutes. During this period the baby had three very severe definite choking spells, associated with cough and cyanosis. As time went on it seemed that this choking became almost a continuous affair and there was a slight tendency toward a stridor. After watching this baby for this period I decided that the baby did not have pneumonia, but had a severe influenza, associated with thymus enlargement. Perhaps an acute thymic condition, if that is possible. The baby was therefore brought into the University Hospital as an emergency and given an X-ray treatment immediately. The X-ray plate was not taken until the following day because of the fact that the baby entered on a holiday. This plate showed an unusually enlarged thymus. Definite improvement was

noticed eight hours after the treatment and certainly the next day the baby was very much better. The X-ray showed no evidence of pneumonia or any pathology in the chest except enlarged thymus. After four days this patient was given another treatment and was then sent home, to return every week in the Out-Patient for X-ray treatment. No other medication was given this patient.

Here we have a very good example of an enlarged thymus in an infant, which has been undoubtedly present since birth, but had never given any trouble until the baby was taken with a very severe infection. In this case it would have been useless to continue treating the infection, because the thymus was an emergency condition in this particular case. This patient remained perfectly well through summer and fall, until late in the following winter, when she came down with symptoms exactly like those given above. The mother recognized the condition and immediately brought the baby to the University Hospital for an X-ray treatment. A plate was also taken, showing a thymus that was still enlarged. The baby responded to one treatment, however, two subsequent treatments were given.

The third case I wish to present is an infant, E. S., male, aged 5 months. This patient was first seen in the Welfare Clinic two weeks after birth. He was followed as a regulation or feeding case, seen on weekly visits until the patient was several months old. On examination this child appeared perfectly healthy, showed some tendency to the thymic build previously referred to, namely, short neck, chubby, but certainly not marked. Color was good, and I would say he showed normal tone of muscle and other tissues. Adenoids and tonsils were not unusual. Cervical and axillary glands were not unusual. No history of any local symptoms of thymus was obtained. Percussion of thymus was negative. General examination otherwise negative.

When this patient was about 4½ months old, he was taken ill with what the mother thought was an ordinary cold. This cold was associated with a cough and rhinitis. As the days went by the cough became worse. Finally it was associated with a stridor, and what seemed to be a definite whoop. At this time the local physician was called and he immediately made a diagnosis of whooping cough. The case was treated as such for the next eight days, the patient getting progressively worse, stridor more marked. These coughing attacks were associated with cyanosis and a stridor that could be heard throughout the house. At this time I saw the case for the first time during the present illness. When seen, the baby had a very marked stridor, that was present all the time and became very much worse during a paroxysm of coughing. It was true that the baby would show a tendency to whoop during paroxysms. The characteristic point of difference was that this baby showed a tendency to choke from the very beginning of any coughing paroxysm and it seemed that the cough was instituted by a choke. Furthermore, the cough was not the striking feature, but the repeated choking. Examination of the chest was negative except for some transmitted noises from the tracheal region. Each inspiration was associated with marked retraction of the space just above the manubrium and of the ensiforme and the rib margin. This latter group of symptoms suggested the possibility of a foreign body, although the other group of symptoms had suggested an enlarged thymus. The case was immediately brought into the hospital as an emergency and was given an X-ray treatment at once, the X-ray plate taken immediately after showed a very large thymus. This case was then treated in the Out-Patient once a week for four weeks. Definite improvement was shown after the first treatment. The baby has been well ever since and has shown no tendency to recurrence of symptoms until winter, when the baby developed measles. At this time he showed tendency to develop a stridor. X-ray showed thymus still enlarged. After two X-ray treatments, symptoms disappeared.

To me this patient suggests an enlarged thymus that has not given any trouble until the patient had had a severe infection. This case is very much like the previous case.

Case 4.—This patient, E. J., is a girl, aged 5 years. She entered the clinic because of asthma. The family history is negative for sensitization. From the past history we gather that she has had "flu," measles and chicken pox. No other illnesses except frequent colds and attacks of bronchitis.

Present History: Asthma was first noticed four and one-half years ago when the patient was 6 months old. It comes on regardless of season, occurring about every two or three weeks, and lasting several days at a time. During these attacks the patient is unable to lie down because the dyspnoea is so marked and wheezes can be heard across the room. Whenever the patient had a cold the attacks were very much worse. Furthermore, she was very susceptible to colds and often during the winter it seemed to be a continuous affair. No history of food poisoning. Examination showed a tall, slender child, long neck, anything but a thymic build, anemic, sallow color, flabby muscles. Tonsils and adenoids removed, cervical glands slightly enlarged. Examination was otherwise negative. Percussion of thymus seemed to show slight increase in dullness to the right, nothing to the left. X-ray of the chest showed a very enlarged thymus. The patient was given X-ray therapy once a week for four successive weeks. She showed definite improvement from the first treatment. Ever since her first treatment she has been free from asthma, which is now a period of six months. Before this time she was never free for longer than two weeks at a time. After six weeks she was X-rayed again. The gland as still enlarged, but very much reduced. The patient was then given three additional treatments.

This case again shows that an enlarged thymus is not always associated with a short neck, fatty girdles, and also brings out the point that the thymus may be the cause of asthma.

The next two cases that I wish to present are very much older children, but they will serve to bring out another point in the thymolymphatic picture. This patient, H. D., female, aged 7, entered the hospital for tonsillectomy, but shortly after entrance, developed diphtheria and was transferred to Contagious. This patient had had a sore throat for several days. She was not, however, extremely sick and did not have the severe aches and pains often referred to in tonsillitis. She had never had diphtheria. On examination, patient does not look very sick, and certainly not very toxic. She is a long, thin individual, long neck. The type that you would think was anything but thymo-lymphatic. Examination of the throat reveals a very extensive diphtheritic membrane over the tonsils. The lungs are negative. Heart is negative except that it is rapid. This patient responded to all questions asked. Mind seemed to be clear. She was immediately given a very large dose of antitoxin because we felt the case was somewhat neglected, yet we didn't feel that she would die as a result of the diphtheria. We, of course, thought she had a moderately severe case, but nothing unusual. She was given 40,000 units of antitoxin into the vein and 20,000 units into the muscle. The patient acted as usual at first, having a marked chill, followed by a high temperature. The temperature began to go up about one hour after the injection and at this point

she manifested a very unusual reaction. We first noticed that she seemed to have more difficulty in breathing, became very restless, would roll and toss, finally wanted to fight. This became progressively worse, breathing associated with a dyspnoea and cyanosis. After about an hour large bubbling rales could be heard through chest, while standing along the bedside. Finally the patient lapsed into coma. Respirations were more difficult and chest seemed to fill up with fluid. Finally the patient stiffened out and died with convulsions.

To consider the cause of death in this case, the first thing that would enter your mind probably would be anaphylaxis. This patient, however, never responded to adrenalin or atropine. Furthermore, the reaction was not a sudden affair, but came on gradually and patient was two and a half hours dying. This, in my opinion, is not characteristic of an anaphylactic death. Death from anaphylaxis is rare in spite of the fact that the reaction itself may be extremely severe. Should it occur, it would be very sudden. The other point that must be thought of is death due to toxemia, but recall that this patient was not very toxic. She responded to all questions, was aware of everything that was going on about her and there was no stupor. There is probably no doubt but that she manifested more or less toxemia, but certainly nothing unusual or to a degree that we would consider dangerous in itself.

The cause of death was practically impossible to explain and, therefore Dr. Cowie demanded autopsy. Autopsy in this case revealed a very enlarged thymus but this thymus was not very broad, but was very long and thick. Those who viewed the autopsy were convinced that death was due to an enlarged thymus.

The point that I want to bring out in this case is that thymic death is not necessarily rapid or sudden. That would probably only apply to cases where thymus was an extreme condition at the time. As you recall, in looking over these cases, it took several repeated infections, several assaults on the body before the thymic symptoms manifested themselves. Therefore, we can see that this whole process could be a graded affair. This patient at hand had an enlarged thymus, which undoubtedly had stood the test of numerous assaults, but, in this case, severe protein reaction, following injection of antitoxin, was too severe a test.

The next case I wish to present was also a case of diphtheria. R. L., a boy aged 2½ years. I saw this case on what I thought was the third day of the disease. There was a definite diphtheriatic membrane covering both tonsils, but there was no extension of this membrane to other parts. The child did not look very sick and certainly did not act it. In my opinion, there was practically no evidence, at least clinically, of any marked toxemia. This patient previously had been operated upon several times for papilloma of the larynx and also had a tracheotomy performed. The general build, however, did suggest a thymo-lymphatic type, in that he was short and fat and had a short neck. He also had markedly enlarged tonsils, associated with definite enlargement of the cervical glands. Axillary and inguinal glands, however, were not unusual. Muscle tone was poor. In other words, it was flabby. Color was somewhat pasty. This case was admitted to Contagious as an ordinary, moderate case of diphtheria and was given the routine treatment of 20,000 units intravenously, 20,000 into the muscle. Forty minutes after the injection the child was taken with very difficult breathing and a choking spell, associated with cyanosis. Fifteen minims of adrenalin were given with what was thought to be slight relief. Fifteen minutes later this patient had epileptiform convulsions which involved no particular part, but the whole body. Along with these attacks were periods of choking, when breathing would become very difficult and the patient would become cyanosed. Adrenalin did seem to help clear up a couple of these attacks but, as the case was further observed, it was noted that they cleared up on their own accord, but tended to become worse as time went on. About an hour from the time the antitoxin was injected, his lungs started to fill up and there seemed to be a marked edema. Fluid could be heard in the trachea and the tracheotomy tube had to be cleaned every five minutes, finally every two or three minutes. 1/300 of atropine was given. This helped somewhat to control this marked secretion. The choking could not by explained in this case by compression of the trachea as the airation was very good. It must have been a reflex caused by the edema which was produced in the smaller bronchials. That is probably what happened, to a more or less extent, in the other cases where we have had choking.

At this time the convulsions were very much worse, so chloral was administered by rectum, but only held the convulsions for a very short period. Three and one-half hours after the administration of antitoxin, patient died in a general convulsion.

I wish to state that this case was X-rayed before operation and thymus was reported negative. This child had gone through several operations, including a tracheotomy, without any ill effect.

In considering the cause of death, the same things would have to be considered as in the previous cases. However, we are more at a loss to explain the cause of death in this case because he had not the slightest sign of toxemia. At autopsy this patient showed a very large thymus but also of the type which was long, narrow and thick. The pathologist said it was definitely enlarged. In both cases the heart showed Zenker's necrosis of the heart muscles. On the other hand, in either case there was no evidence of the heart suddenly giving out. In fact, the heart continued to beat after respiration had ceased.

CONCLUSIONS

In summing up, I wish to point out that a baby that is born with an unusually large thymus may show very mild, local thymus symptoms from the start.

Second, that these symptoms may never attract attention until after the baby has had several colds.

Third, that these babies seem to be more subject to colds or infections.

Fourth, that repeated infections in a patient who may have only a moderately enlarged thymus and in whom no history of thymic symptoms is obtained, may prove disastrous.

Fifth, that thymic death is not necessarily sudden.

Sixth, that X-ray is a very valuable asset in making a diagnosis, but is not necessarily final. Physical examination may show an enlarged thymus when the X-ray fails and vice versa.

Seventh, the choking, in at least some cases, can be explained by a reflex condition, produced by more or less edema in smaller bronchials.

THE PSYCHONEUROSES—SOME NOTES AS TO DEFINITION AND TREATMENT*

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In this day of dynamic commercialism, contagious materialism, and infatuating locomotion, the general practitioner and even the neuropsychiatrist himself can find little time for a study of the extensive and the fast increasing literature of neuropsychiatry. The armamenterium of both, however, must include a working conception of the medical entities and conditions with which they come in daily contact. For that reason, then, is your indulgence requested for a brief interval in a consideration of the psychoneuroses.

DEFINITION

When such a thorough investigator as Bleuler (1) tells us that hysteria and neurasthenia are latent schizophrenias; when such an enthusiastic psychoanalyst as Brill (2) writes, "The main character of hysteria is not the splitting of consciousness as asserted by Janet and his school, but the ability to convert the sum of strangulated emotion, either totally or partially, into that motor or sensory innervation which is more or less connected with the traumatic event"; and, when such an American authority as Schwab (3) says, "A psychoneurosis is the automatic defense of the nervous system through which, for the time being, the individual is protected from a succession of experiences which tend to weaken him and in the long run to threaten his continued existence," one is apt to question his professional compass. One may well inquire as to the true north and whether the degree of deviation is not somewhat misleading.

Kempf (4), in his Mechanistic Classification groups all the mental disease syndromes under the designation "neuroses;" Jelliffe and White (5), and Brill (6), apparently after the grouping of Freud, speak of, the "Psychoneuroses" (hysteria and compulsion neurosis) and "the actual neuroses" (neurasthenia, hypochondria, and anxiety neurosis); Schwab (7), uses the terms neurosis and psychoneurosis interchangeably and synonymously, but prefers the term neurosis. Then, too, it will be recalled that it is only in the recent past that "neurasthenia" was regarded as "the garbage can" of neuropsychiatry because most ill-defined and undiagnosed nervous and mental conditions were thrown into it. At the persent time it would appear that "neurasthenia" is getting a much needed rest and "psychoneurosis" is the common "catch-all."

Clear it is, then, that the medical profession, and the laity as well, are very liberal in their use of the term psychoneurosis. Such liberality of use, although befraught with dangers, is probably as much a help as a hindrance. In the first place, it shows an escape from slavish adherence to questionable terminology and classification. Secondly, it shows openmindedness towards the symptom-complexes under discussion; it shows scientific conservatism, and an unwillingness to pigeon-hole for future reference alone reaction-syndromes that are exciting increasing interest for their interpretation. General practitioners, internists, surgeons, pediatricians, orthopedists, endocrinologists, in fact, workers in all fields of medical, and even social endeavor find themselves confronted with growing frequency by these interesting types of reaction.

The designation "neurosis" finds its advocates among those who would emphasize the somatic factor. While "psychoneurosis" finds its staunchest supporters among those who would lay stress on the psychogenic etiology. Realizing the extreme frequency with which morbid mental attitudes and extreme affective reactions enter into these symptom-groups the applicability of "psychoneurosis" must be admitted not only as fitting but also as definitive of a definite disease group. When we reflect that the angio-neuroses and the tropho-neuroses most certainly grade into the more somatically founded conditions on one side and the more psychogenically founded conditions on the other side, there is even room to believe that both the terms "neurosis" and "psychoneurosis" are distinctly applicable to certain groups of pathological manifestations. Considerable difficulty, however, is encountered when anything like a clear presentation of these groups is attempted. This is due mainly to the fact that the psychoneuroses have their being in that intermediate, or temperate, zone that lies

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between the two polar extremities of normality on the one hand and unquestionable abnormality on the other hand. They are familiarly referred to as borderline conditions and after being thus characterized are left too frequently to the efforts of the psychologist and the social service worker. Both those able investigators are doing much to bring adjustment to the psychoneurotic sufferer, but they should not be called upon to bear so completely the burden of a medical problem. The close relationship existing between normal behavior and the first break leading to the activation of the mechanisms of the psychoneuroses is fully as important as is the relationship of the full-fledged psychoneurotic reaction to the psychoses. Hence, the physician who would do his just share in the study of these floundering humans must be fully cognizant of the range of their symptomatology. Within that range come all the variations due to the stress of somatic illness, accidents and injuries, and all the strain incident to difficult domestic, economic, and social situations.

Concreteness may be injected best into our study of the psychoneuroses by considering them, after the manner of Schwab (8), as protective and defensive reactions which spring into being when the individual is under stress or when the organism finds it more advantageous to substitute for its usual environmental reactions some other adaptive response of the nervous system. Such a definition as this is not intended to supply a rule-of-thumb formula whereby the psychoneuroses may be recognized unequivocally. But, it does give us a working basis for a more adequate study of their manifestations. At this age and stage of neuropsychiatric knowledge it is premature to expect definitions that will stand for all time. This applies especially to such a protean group as the psychoneuroses.

Before proceeding to additional formulations mention must be made of that persistent tendency to regard many of the reactions common to the psychoneuroses as voluntary phenomena wilfully induced by the patient. Volitional simulation of disease is rare. Malingering is occasionally seen in psychopathic personalities but finds no place in the psychoneuroses. The tendency to feel that the patient is intentionally and with full awareness manufacturing symptoms is truly an admission of failure on the part of the accuser to fully understand the underlying mechanism of the patient's difficulty. Since this fact is commonly agreed upon by all who have given the psychoneuroses extensive study it may be dismissed without further reference.

Whether the psychoneuroses have an organic foundation is a question that is difficult of satisfactory settlement and at the present stage of their study is of only secondary importance. The primary essential is to recognize that they involve the individual as an integrated whole, and not even as an isolated functioning human unit, but as one in close relationship with his fellowmen and subject to all the demands of organized society. That difficulties may occur at different levels in the functioning of the human organism must be clear—fully as clear as the fact that difficulty may come to any of the many parts of a motor car. But some parts are more liable than others, so with the human machine. The one matter of prime interest is always of what speed, what work, and what joy-making is the machine capable; i. e., what are its expressions of activity as a unified whole. In such an approach it is recognized that disturbances at the purely physicochemical, or physiological, level and at the psychological level all have an important bearing on the sum total representing the symptom syndrome under discussion. The role of the endocrine glands and other somatic organs, or groups of organs, and the role of the instincts and of psychic symbols must be given careful consideration and although all are undoubtedly involved, at one time or another, in whole or in part, it is not attempted to saddle onto any one of them, to the exclusion of the others, the burden of the etiology of the psychoneuroses. The fact that present scientific data appear to show that the psychoneuroses are not accompanied by any demonstrable anatomical changes in the central nervous system does not gainsay in the least the probability that the reactions of the central nervous system are influenced by anatomical changes in other organs of the human biological unit. Such reasoning also sounds a warning in regard to the too liberal use of the term "functional." Unfortunately that term has come to imply too dogmatically that there can be no accompanying structural changes. If a man cannot bend his arm at the elbow is there not something wrong with the function of the arm? Causative structural changes may or may not be present. Shall we call it a functional impairment only if no structural change can be demonstrated?

To what group of symptoms may the designation "psychoneurosis" be applied? To attempt to outline such a group in anything like a conclusive manner would be presumptious and premature. In a preceding paragraph a very general definition has been given. Let us circumscribe its application still further by acknowledging that we may with scientific propriety include under it most conditions defined in the older terminology as psychasthenia, neurasthenia, hypochondriasis, hysteria, anxiety neurosis, and traumatic neurosis. The last named is often grouped under neurasthenia

and under hysteria by prefixing the word traumatic (e. g., traumatic neurasthenia and traumatic hysteria). Naturally, certain atypical forms occur but they can usually be grouped as allied to those named. Recalling these older terms and the symptom-pictures which they represent fills the purpose of general orientation and deprives the word psychoneurosis of some of the mysticism with which it is regarded by some. The symptomatology, subjective and objective, of the psychoneuroses is that common to the old-time groups enumerated, but it may generally be typed somewhat more accurately by a careful study of the psychical mechanism underlying their individual manifestations. The mechanisms most commonly involved in the psychoneuroses are, suggestibility, mental conflict, fixation, elaboration, compensation, suppression, repression, dissociation, and regression. A full discussion of these mechanisms is beyond the scope of the present paper. They will be found fully outlined in most of the recent texts on neuropsychiatry. A further aid in the typing of the psychoneuroses may be had by remembering that in the case of the first thee named the symptomatology is very largely worked out in the field of full or partial mental awareness while in the other three and especially in the hysterias and the anxiety neuroses such is not the case—the symptomatology in those psychoneuroses finding its perpetuation in that sphere of the psyche referred to by various writers as the subconscious, or the unconscious.

When shall a group of reactions, as the first deviations from those regarded as normal for the average individual, assume the dignity of being representative of a psychoneurosis? This ponderous question unhappily does not permit of a "once-for-all" decision. A full appreciation of its significance is best obtained by realizing that it is absolutely essential that each individual case be carefully studied as to its activations or motivations. Is this individual's reactions to his environment excessive, are they giving him or others too much concern, are they defensive excuses for magnified difficulties, are his emotional responses excessive for the nature of the stimuli, is there disproportionate unwillingness to face the issues at hand, is his efficiency for work and for social contact reduced, are his rationalizations reasonable, is he adequately selective in his tactics or is he too constantly hedging behind poorly chosen ramparts, so on and so forth? A careful consideration of these reactions and any others not in harmony with usually accepted attitude and conduct—these potentialities of the psychoneuroses, must lead to the conclusion as to the presence of incipient psychoneurotic reaction. This question may be more exhaustively and more correctly attacked through detailed studies of the personality makeup of the individual. These studies are very fruitful when carried out after the manner of Hoch or of Amsden. On the basis of such studies the earliest evidence of reactions that may be evaluated as indicators of probably later psychoneurosis can be classified with considerable satisfaction.

The transition of the psychoneurosis to the psychosis is another moot question. Its solution is by no means at hand. It is an alluring field for research. To the busy man in the daily practice of professional medicine some workable criteria are necessary. These criteria must be practical in their application and acceptable to home, community, state, and nation. When may a neuropsychiatrist, or any other physician for that matter, send a psychotic patient to a hospital for the insane? With rare exceptions, only when that patient's conduct becomes intolerable to organized society, and not until then. The public is the final judge. May we call in the same judge in the case of the psychoneuroses? Yes, only in a slightly different manner. Most individuals must follow some sort of employment in order to obtain a livelihood; all engage in some form of occupation or social obligation during the active years of their life. Hence, when any individual becomes so burdened by a group of maladaptations and faulty reactions that he cannot carry on in the work or the social station in which he finds himself he becomes a casualty which our other premises permitting, may be designated as a full-fledged psychoneurosis. Groups of reactions of less sweeping character and not incapaciating the individual for the duties through which he gains his sustainance or which are encumbent upon him because of social favor or position may be classed best probably as belonging to types of personality make-up as determined by Hoch or Amsden studies.

Having thus far in our discussion called attention to a workable hypothesis of the psychoneuroses and grossly laid down their limitations we will give next some attention to their treatment.

TREATMENT

Treatment of the psychoneuroses as treatment of other disease conditions to which the human organism is liable may be either symptomatic or curative. Symptomatic treatment includes those measures that are palliative only, it does little more than to make the patient comfortable and is sufficient only to tide him over until some new situation, some new circumstance of stress, or other reprecipitating event causes a recrudescence so to speak of his still imperfect reactions. A sedative may temporarily relieve the headache symptomatic of an organic malady and give to the patient

a much needed rest, but as soon as the pharmacological action of the drug is spent the headache returns. So in the case of any hysterical aphonia. The aphonia may be removed by simple suggestion or countersuggestion, but unless the causative situation or event be discovered and be brought to the understanding of the patient in acceptable terms the aphonia will recur sooner or later.

Curative treatment of the psychoneuroses is very extensive in its scope. It may be approached from various angles. The dogmas of no single school of therapy are all-sufficient.

For the purpose of this paper the opening scene of our professional drama may well concern itself with its two principal actors and by no means is the patient always the more important of the two. Let the physician make a careful personal inventory of his qualifications, his time, and his patience. If he be in doubt as to any one of these three prerequisites, let him concern himself about their immediate acquisition. That no misunderstanding arise let it be known that the problem of the psychoneuroses is not the problem of the neuropsychiatrist alone. No one is more advantageously placed for the observation of the earliest deviation from normal behavior and for the detection of the etiological factors than is the family physician. Hence that master of the public health stage must so train his professional eye that he will be able to recognize those social pulse changes, those community situations, those domestic events, and those economic trappings that give rise to the first psychoneurotic reactions. In their successful recognition and in their prevention lies the greatest hope of effective treatment. The importance of this attitude is emphasized by Barrett (9), Chapman (10), and many others.

Next may we see the patient in the physician's office or in his examining room. For the sake of presentation let it be the first actual meeting of physician and patient. Two variables confront each other and without any intention of criticizing it must be admitted that the attitude of the physician may often be as variable as that of the patient. All the more important then is it to remember that while the physician is questioning, examining, and sizing-up his patient, the patient is also according to his own custom, and often very special way, sizing-up the physician. At that meeting are made those mental inoculations, those impressions, upon which the success or the failure of future therapy very largely depends. The dignity of a detailed anamnesis and painstaking examination is consequently fully evident. If the patient can be made to realize that now as never before his difficulty will be carefully studied, hope rises and when it triumphs over his doubts the first stage of therapy is successfully initiated. In thorough history-taking with conscientious examination, in both of which the patient's co-operation has been enlisted and fostered by appropriate supplementary remarks, we have, indeed, a therapeutic agent of primary importance. It is usually not so regarded but without it success in treatment is problematical. Without question, in cases successfully treated by psychoanalysis the success of the psychoanalyst is in no small measure due to the patient's conviction that his physician is going into his case to the nth degree and such abnormality as may exist will be detected. He is, therefore, all the more receptive of the efforts and the final statements of his analyzing physician.

With exhaustive history-taking and detailed examination comes greater ease and greater certainty in making the proper diagnosis. As in the study of other diseases so in the case of the psychoneuroses, proper differential diagnosis is exceedingly important, for upon it depends the recognition of the psychical mechanism responsible for the symptoms manifested. At the present time the patients themselves are ready for detailed inquiries and examinations, in fact, desire them and even demand them. The following experience is common to most neuropsychiatrists. A rather lengthy interview and painstaking examination was personally being granted to a patient with no very outstanding difficulties. Presently he spontaneously remarked, "Doctor, I am glad you are going into my difficulties so thoroughly, I have had many prescriptions, but no real examinations and so I still have that pain in my right side." It was found that the pain in his right side was only very secondary. What the patient really was concerned about were his seminal emissions, premature ejaculations, and his fancied loss of sexual potency. Had we not given him time to come finally to his real trouble, we too, would have missed giving the relief he was seeking.

Another important essential in the treatment of the psychoneuroses is the giving of proper attention to the patient's reactions to his environment. Just what is his industrial and his social efficiency? How is he meeting the demands of his employer, his social contacts, his relation to parents and home if single, or his marital obligations if married? Often common-sense advice by the physician in regard to the patient's difficulties in these spheres will do much to bring about his readjustment and will help to re-establish him as a more efficient social unit. With such aid in stabilizing himself, the complaints that brought him to medical attention often disappear completely. With several further visits to the physician for the purpose of weeding out faulty rationalizations and substituting for them some funda-

mental conceptions regarding the application of some of the biological principles of life the patient is often fully prepared to meet again the ordinary wear and tear of his daily routine. This point of attack has been stressed by Campbell (11).

Those cases with a record of long standing personal and environmental maladaptations, social inefficiency, and industrial invalidism, usually do not yield so readily. Very detailed study is necessary and on the basis of that study is the responsible psychical mechanism determined. Then on the determination of that mechanism depends the type of treatment suitable to the case. The treatment may include any of the general methods or the special methods known to the field of psychotherapy, or the entire domain of medical science. It is for this type of case that the general practitioner and all medical men, except the neuropsychiatrist usually do not possess the time, the patience, nor the inclination to carry out the tedious studies and the psychotherapeutic methods. For that reason it is as a rule best to direct that type of patient to the neuropsychiatrist as soon as his condition is recognized.

Only indirect reference has been made to psychoanalysis, that special method for selected cases, no mention has been made of the autognosis of William Brown, of hypnosis, and other special methods. Permit me to dismiss them with the reference that they are the instruments of specialists and are best used by them.

This brief discussion of the treatment of the psychoneuroses would be incomplete without mention of the importance that lies in each physician considering himself, regardless of his interests, an active member of that still largely unorganized endeavor known as the mental hygiene movement. Mental prophylaxis is truly as important as the prophylaxis of epidemiology.

In conclusion, the psychoneuroses represent clinical entities that permit of definition and circumscription fully as well as most of the organic diseases. They permit of rational therapy and the results obtained are as significant and encouraging as results obtained in other domains of medicine.

DISCUSSION

DR. H. A. REYE, Detroit: We have listened to a very able and a very excellent presentation of a very difficult subject. To be able to give a survey of the psychonsuroses in this brief space of time is an exceedingly difficult thing. Dr. Heldt has done it very well, indeed.

His definition that the psychoneuroses are protective and defensive mechanisms in a large measure is absolutely correct.

A question that has always been of interest to me is, why is it that these individuals do take the defensive reaction? What are the forces that compel them to do so?

I do feel that in the most recent past there has been a great tendency to overlook the factor of heredity. I feel very strongly that these individuals are hereditarily burdened and that they are not so strong as the average and that therefore they find it more difficult to fit into this extremely complex society as it is now organized. Besides that, I feel that a good many come into the ways psychologically by environment. Children are placed in the care of a psychoneurotic mother and see her actions and cannot help but copy these examples. There we have one of the most potent factors for handing down the psychopathic types of reaction. Children should be guarded against the influence of the father or mother or aunts who are patients at the present time in physicians' hands.

In a general sense, it may be said that the psychoneurotic is inadequate, however, he tries to retain himself within the limits of social approval. Being unable to adjust himself adequately produces a fear or anxiety that he may lose social approval. It is, after all, a measure to combat this anxiety, to get rid of this anxiety, to adjust himself in some way, that is fairly successful. Hysteria, I dare say, is the most successful in that way.

The psychasthenic or inside neurosis is not so successful. The place of conflict is quite near the surface, so that these people are extremely unhappy. They are extremely troubled and very much in need of help. The hysteric has solved his or her problem to their own satisfaction. Many of them are by no means willing to be saved from their situation, for they gain by the situation. Such is by no means true of the psychasthenic, who are among the worst cases we have. They should be given relief. It is extremely difficult at times to give them relief.

The hysteric, I do feel, is quite satisfied, generally speaking. In them, when they have worked out a mechanism of this nature, they utilize it to obtain advantages. They use their types of reaction in order to make their life more satisfactory. Many of them do this consciously. It is by no means uncommon to detect them in malingering. I feel that the hysteric eventually becomes fairly conscious of how he can use this method.

I will never forget one of my earliest cases. The husband came rushing to me and said that his wife was having fits. He was very much excited. Sure enough, she was having wonderful fits. I saw that she was peeking out of the corner of her eye watching me. I said to him, "Get me some aromatic spirits of ammonia." When the husband was out of the room I said, "Now, come out of it. What are you doing this for?" She said, "My husband is running with another woman and that is the only way I can keep him home."

DR. A. L. JACOBY, Detroit: I feel that it is very little I can add to the able presentation by Dr. Heldt and Dr. Reye. However, I might mention the social significance of the psychoneuroses which has already been touched upon by both doctors.

During the recent war we were all impressed by the tremendous disabilities occasioned by the so-called shell-shock. It was in many cases a defense against impending danger on the part of the individual soldier. Shell-shock is not peculiar to war. It occurs in family life and in industrial life.

The problem, then, of disability by reason of psychoneurosis is probably one of the largest single factors with which the physician has to deal. The physician's duty to the community is the preserving of mental function. It is of small importance to society, whether the wage earner of the family is disabled by reason of pneumonia, a broken leg, a brain tumor or a functional nervous disorder. He is just as completely disabled. The family must be just as completely supported by some other agency.

Therefore, these factors, such as psychoneuroses,

assume tremendous proportions from the social viewpoint.

The association of malingering and psychoneuroses often occur strikingly in the same individual. This has been observed by some who have had to do with malingerers.

Dr. Wilson, five years ago, gave a definition of hysteria which gave rise to some criticism being thrown at him. He defined a hysteric as an individual who unconsciously avoided his responsibility, while a criminal was an individual who consciously avoided them. They were both equally damning to the community. He was accused, by such definition, of placing them in the classification with crooks, which was not what he intended.

I have seen an individual who openly malingered, even eating soap or secretly heating a thermometer for the purpose of getting into a hospital and escaping part of his prison sentence. He then developed an hysteric paralysis of one arm. It is not correct to refer to his hysteric paralysis as malingering, nor right to refer to the malingering as a psychoneurosis. Keep an eye on the individual who both consciously and subconsciously wishes to avoid his responsibility. He tries one method, and when it fails, another group is utilized. I have seen it interchangeably time and time again in the same individual.

There is such a thing as too great propagation of the knowledge and association between malingering and psychoneurosis in that it will produce an opposing reaction on the part of the public. It will make them feel sorry for the psychoneurotic and no longer regard him as sick. We, as members of the profession, need not feel sorry. It seems to me to depend largely upon the ability of the physician to maintain a neutral emotional reaction toward the patient. He should not sympathize too greatly and at the same time should not maintain a harsh or resentful attitude.

We allow the patient to know that the doctor regards him as evading his duty. We at the same time impress upon the individual that his duty is to support the family, if a male. If a female, we impress upon her that it is her duty to take care of the home. And we do not let them lose sight of that for a moment during the handling of the case.

DR. FRANK R. STARKEY, Detroit: After these presentations we have already listened to, the subject is pretty thoroughly exhausted. I agree, of course, with all that has been said. I would like, however, to emphasize two points.

One is the importance of prophylaxis. I think there is no nervous functional disease, at least, that we have to handle, in which prophylaxis plays a more important part than in this particular group of which we are speaking.

The handling of the child from the moment it is born, or possibly even from the time before it is born, is of the utmost importance. Many children have a psychoneurotic makeup thrust upon them by the handling by their parents.

I believe that we, as neurologists or internists, should make it a point to impress upon parents and those who have to do with the handling of children in their early years that they are paving the way for future trouble by permitting tantrums and pampering to the whims and wants of these youngsters.

It has been said by some that psychoneurotics are born and not made. I agree with that to a considerable extent. I think that psychoneurotics are fundamentally deficient in their emotional stability. But I think also that we are all potentially psychoneurotics. I believe that we can all, under given stress, develop some, at least, of the chain of symptoms that go to make this up.

We have heard this paper by Dr. Sladen upon hypertension of the circulatory apparatus. This is closely associated with hypertension of the nervous system. These individuals are frequently hypertensive. If we can teach these people to relax it would do much to overcome their condition. If we can remove fear of their malady, their condition is pretty nearly cured. But the treatment of the condition in early childhood, I believe, before it is well established, is of the utmost importance.

DR. THOMAS J. HELDT (Closing): I am grateful to the doctors for their able discussion. It has brought out many points that I was unable to emphasize adequately in the time that we had this morning for the consideration of the psychoneuroses.

As Dr. Reye stated, I think we may well grant that a psychoneurosis has probably many of its potentialities founded in heredity and, furthermore, from that point of origin the developing individual is also too often blamed for what an environment imposes upon him.

When malingering is carried to the extent that it is no longer acceptable to society, the question of penalizing the guilty individual becomes a definite issue. Yet we should take an equal amount of interest in the factors that have given rise to the reaction that has brought about that conduct for which we are voicing our censure. From the simple habit of smoking we may possibly draw an illustration. Suppose we take ten rather inveterate smokers, and deprive them of their tobacco. Each of them, as you know, is going to experience a difficult time in adjusting himself to the deprivation in question. Not only that, but from our experience we know that not a few of them will surreptiously return to the habit when not under the closest observation, and will even construe too liberally, not to say purposefully misinterpret, the directions given them. So with malingering, we are often too ready to class overt conduct as malingering when in its final analysis it is something other than such type of response. The most important thing is to get at the mechanism that underlies the abnormal behavior which we are endeavoring to correct. With a thorough understanding of that mechanism we will often be able to unravel the difficulty at hand, and obtain quite encouraging results.

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Report Malpractice Threats Immediately to Doctor F. B. Tibbals, 1212 Kresge Building, Detroit, Mich.

Editorials

THE JOURNAL

A member, not intimately connected with the work of editing and issuing The Journal, cannot be expected to be familiar with the many details that are involved. In the absence of such information and in the quest to secure that which will be of greatest personal value and interest to oneself it is not inconsistent and unreasonable that in the enthusiasm of such quest an individual would overlook and fail to consider the difficulties of the Publication Committee and the Editor and, possibly with little thought, give utterance to criticisms and expressions of disapproval, even condemnation. That is to be expected particularly when the individual is part owner of the publication. It is also to be expected that the individual's personal opinion and appraisal will continue unchanged unless he receives definite enlightenment. Therefor to eliminate wrong conclusions, to impart facts and to present some of the more important features of editorial duties and policies we purpose in this editorial to discuss some of the more important factors that govern our editorial labor. It is sincerely desired that each member will give careful consideration to the facts that are imparted.

In the annual report of the Editor there will be found the following extract. We desire to repeat it as a preface to that which is to follow:

Our editorial policy is formulated by the Publication Committee. Our editorials and editorial comments are governed by that policy. Fundamentally we assume that the foremost objects that are sought to be obtained by the Journal are:

1. A medium for publication of the scientific papers, scientific studies and clinical observations of our members.
2. Publication of Organizational Activity.
3. Publication of news items and events.
4. Editorials imparting information as to scientific progress, discussion of medical economics and advancements of facts and information in order to formulate and mould sound policies and united expressions of desirable attitudes upon the medical topics of the day.
5. To impart the Society's stand and relationship as regards the profession's contact and concern with public questions.

With this platform ever in view, we have sought to cause the Journal to reflect the Society and not an individual. We have, when circumstances compelled, opposed the individual, or minority group, for the sole purpose of conserving the rights and interests of the majority. I am of the opniion that such must ever be the editorial policy of The Journal—the interests, the welfare of the whole and not of the minor or individual part.

During the past year we were specifically directed to oppose a certain legislative proposal. In doing so, a small group of members took offense and sought to discredit your Editor because he complied with the explicit instructions of the Council. This caused us no personal concern. It is commented upon for the purpose of pointing out that in the endeavor to attain that which events and experience indicates to be the best for the whole Society, we will invariably, no matter what the question may be, antagonize and oppose the personal desires and aspirations of a few. It is ever thus.

The Journal editorially cannot assume a straddling or neutral position upon medical problems and practices. It must assume a definite position and stand. That position must represent the mature, deliberate judgment of the majority of our members. Having assumed that position, it is consistent and essential that it be fully and fearlessly defended. To ever be neutral, to assume an evasive policy, to cowardly refrain from exposing pernicious and individual or collective, selfish activity that affects our Society, abrogates our rights, robs us of our independence, or discredits us before the public, would be to issue a Journal that would be peurile and but of small value or interest. Our members have a right to expect and receive authoritative information upon all medical, economic problems, and likewise they are entitled to detailed facts in regard to all proposed or established medical activities.

In the pursuit of such a policy we will at times, and regretfully, tread upon the toes of individuals. Unpleasant as such a necessity may be, can we do otherwise? We hasten to add that such necessities amongst ourselves would be few and far between, did propo-

nents of movements come forth, openly and frankly, and give expression to a willingness to discuss their proposals and plans with our organization, the Council and our officers and to seek and receive mutual co-operation and advice. Such must be recognized as a desirable attitude and one that should be sought for with avidity.

Personally, as Editor, I have never caused the assumption of a definite position upon any subject without first seeking the advice and instructions of the Publication Committee.

It is hoped that this detailed explanation will be received, as intended—not as a statement of justification, but rather as information for your guidance.

One cannot, unless daily familiar with the numerous details involved, appreciate the work entailed in editorial direction.

Each issue is of limited space. We seek to publish submitted articles as promptly as possible. We are ever confronted with an increasing number of articles awaiting publication and delays, vexious though they are to authors, cannot be avoided. If it is your judgment, and we request expression thereon, we believe that the Journal is entitled to expend all of its earnings in bringing about more prompt publication of these articles by the issuance of a large publication each month. Shall we continue to cause the Journal to liquidate the deficits of the Society? Your instruction is requested.

That is our general policy. It is not the policy of the Editor alone, nor of the Publication Committee, but the policy of the Society that has been approved by the Council and which governs and controls the Publication Committee and the Editor.

Under that policy, what is the first difficulty encountered. It is ever our greatest problem to please all our members in the matter of original articles. Unfortunately we are not all equally interested in the same subjects or the same specialty. We must publish a variety of original articles so that each group may find in each issue some one or more articles that are of interest to them. At times only one and sometimes none are of interest to you personally—but please remember that there are some eight or ten special groups of readers to serve and our publication is not large enough, nor have we sufficient funds to meet the interests or desires of all these groups in one issue.

Original articles are derived from the papers that are read at our annual meeting and from voluntary contributors. Neither we, nor the Publication Committee, can write them. These two sources comprise our supply, and determine their nature. If there are too many surgical papers, too many special papers or too many papers along one line with an absence of those covering another field it is not due to any editorial inclination or preference, but rather because representatives of such special specialties participate in our programs and so submit more articles for publication. If you want more clinical case reports, more everyday experiences, more articles on therapy, less of the scientific and research type and more of the practical, there is only one way to secure them and that is for our members—you—to write them, read them before sections or county societies and send them in. We have repeatedly requested, and again request, such articles and when received we give the assurance that we will cause them to be published in due proportion to our other articles.

While on this subject of original articles it is well at this time to state that the type of article desired is one that imparts something definite and is instructive. To send in for publication that which is composed chiefly of text-book quotations or quotations of articles already published and imparts nothing but these quotations is to presume on our limited space. What is desired is articles giving personal experiences, observations, studies, results and conclusions. We can read the rest in text-books. As a rule short, conclusive and definite articles that are void of verboseness and flowery style and which enlighten and aid the reader is the type of article that is most desired and interests the greater number of readers.

Original articles are published under the following rules: First—Preference is given to articles that are read before sections during our annual meeting; Second—Submitted articles are published as promptly as possible and the promptness of their appearance is governed by the purpose to cause each issue to contain articles that are of interest to the largest number of special groups of practitioners. For illustration: If in one issue we have allotted an article on medicine, surgery, gynecology, and pediatrics and two submitted articles are received one of which is on a surgical topic and the other on the eye, the article on the eye will have preference for that specialty is not covered in the original articles of that issue and surgery is. Likewise if space is available and it is, February and we have before us two submitted articles, one on the Diarrhoea of Infants and the other on Bronchial Pneumonia In Infants, we will give seasonal preference to the article on Bronchial Pneumonia and delay publication of the article on Diarrhoea until the summer months. These are the only rules that govern the publication of original articles. It is true we may in the course of a year publish a greater total of surgical or specialty articles, but that is beyond the control of the Publication Committee or of The Editor, for they cannot be held accountable because surgeons or others are the more prolific writers. The main thought is to supply, in so far as possible, the wants and desires of all just as the contributed copy is submitted.

The editorial and editorial comments eminate from the Editor and at times from contributors. When a member sends in an edi-

torial, and they are always welcome to do so, in fact, they are solicited, the contributor's name is always appended. The extract from the annual report of the Editor imparts the policy that governs the editorial pages. It may be well to repeat that no definite editorial stand or criticism is ever taken until it has been taken up with and discussed by the members of the Publication Committee and careful consideration is given to what is clearly the opinion and sentiment of the majority of our members. Here again it is pointed out that the editorial policy is not the personal opinion, views or desires of the Publication Committee or the Editor. Our editorial attitude is the attitude and reflects the sentiments and opinions of the majority of our members. Let that be ever remembered. If you find that the editorials conflict with your personal opinions and your personal interests, please remember that that is so because the majority of our members are not in accord with your personal views and that it is not a personal attack upon you, or perhaps your group, but rather an expression, attitude, desire or command of the majority opinion of our members. We are very desirous that this shall be clear to every member for only a few are aware that this rule governs the editorial page.

News Notes imparting the activities of our members are desired and are repeatedly solicited. This, as time passes, form a valuable historical record of the profession of Michigan. Unfortunately the editor cannot keep conversant with the doings in every part of the state or with the activities of all our members. We are therefore dependent upon our members and county officers to send in these items for publication. Please do. We cannot depend upon a Newspaper Clipping Bureau because so many non-medical men are given the title of "Dr." in the public press. We did use a clipping bureau once but soon found that we were publishing news items about "Dr." Chiros and Osteos and similar pseudoists and promptly discontinued relying upon newspaper clippings. So please send in the news items from your vicinity. And if Dr. John Doe's name appears more frequently in our news columns than does yours do not hastily conclude that we are a personal friend of Dr. John Doe and are boosting him or showing favoritism. That is not the case. The facts are that John Doe is sending news items and you are not and so your name does not appear. We cannot manufacture personal items to keep you abreast of Dr. John Doe.

Much to our regret, death invades our ranks. We are extremely desirous of recording all deaths of doctors whether they are members or not. So here too, we repeat, when death terminates a fellow practitioner's life, please aid us in recording it by sending in an obituary notice.

Now just a word about our advertisers. If you read the financial report, and we trust you did, you will have learned that we are able to print and issue the Journal at the nominal price that is charged to you because of the revenue derived from our advertising pages. This advertising revenue is not a contribution. It is an investment by the advertisers and they will continue that investment and make the Journal possible just so long as they receive a reasonable return upon their investment. The amount of that return is determined by the patronage that you, individual member, give to our advertisers. They merit your business and you are in a measure bound to give them preference when making purchases or in placing orders. If you withold that patronage, if the advertiser does not receive a fair return upon his investment then he will discontinue his advertisement in the Journal and eventually you are deprived of that revenue. So we urge, that to continue our present publication, to make it possible to issue a larger Journal that will meet the desires of all our members, to minimize the amount of your annual subscription and to help maintain our advertising revenue—patronize our advertisers and give them preference.

We trust that we have given you an insight to the Journal that will enable you to perceive that which your Publication Committee and Editor is seeking to attain for your benefit and pleasure. We have touched upon but a few generalities. We have said nothing about a host of minor details that require supervision and we have omitted to direct attention to manuscript preparation, typing, spelling, abbreviations. Neither have we commented upon the mechanical and printing problems that are causes of monthly controversies with the printer and his "devils." These griefs are part of the established routine and are only of remote interest though they do call for a very appreciable amount of time from the editor. We conclude with the definite statement that the Publication Committee and the Editor are endeavoring to serve you and to meet your desires. At all times do we welcome your suggestions, your advice and your constructive criticism, for then, in joint co-operation, will it be possible to attain the desired end.

MEDICAL BROKERAGE

At the dinner meeting of the Council in January there was a general discussion of medical problems and practices. We were very much impressed by the assertion made by one distinguished ex-president charging that there was far too large a tendency to-

ward medical brokerage. As illustration, he cited a case of one patient who had been referred from doctor to doctor for a host of examinations and opinions without definite benefit or a diagnosis. This individual came finally to the speaker asking where she could find a doctor who would again refer her back to her family physician. He also cited an incident where a husband stated to his wife: "We have employed Dr. Blank for fifteen years and all he has ever done for us is to refer us to another doctor or specialist. Every physician could undoubtedly recite similar incidents. Lay individuals would provide us with a multitude of similar experiences.

The query is naturally pertinent: Is this medical brokerage practice right, is it just to the patient and doctor? It is recognized that expert opinions are desired and special examinations required to make a diagnosis. However, in securing them should the policy not be one of consultation and not reference? Should not the family doctor, the original attendant, maintain and continue constant contact and supervision of the case? Would not such personal supervision by the family doctor provide better for the patient's need and eradicate the medical brokerage tendency? There are, we recognize, arguments on both sides but in the end how are we ever going to put a stop to this brokerage practice and limit its evils if we fail to ignore the family doctor. Certainly we do not desire "Medical Brokers or Jobbers." We invite discussion of the problem.

JOINT COMMITTEE ON PUBLIC HEALTH EDUCATION

In the correspondence column of this issue will be found a communication that has been sent by the Chairman of the Council to the officers of County Societies. We draw special attention to that communication. The call comes for more speakers. Each County Society is required to nominate additional members for the corps of speakers. It is a pressing need that must be met for the Committee is receiving a large number of requests from lay organizations and cannot be neglected. We must cause this movement to go over big for it is the professions golden opportunity. We repeat, send in nominations promptly and add your support to the work of the Committee.

QUACK DOCTORS

We have always felt that reputable physicians should value and utilize their medical society membership in every possible way. Such membership is not an idle affiliation. Over and above everything else it is an endorsement of your reputation and professional standing. It is right and proper that the people of your community should be aware of the fact that you are in good standing in your medical society.

The Muskegon Chronicle recently featured this point in the following editorial, which furnishes you much for thought:

EXPOSING QUACK DOCTORS

(From the Muskegon Chronicle)

There is one form of advertising in which reputable physicians and surgeons could indulge in accordance with the strictest interpretation of their ethical code. It would protect the public against imposters and would indicate which practitioners in every city, town and county or locality are in good standing in the fraternity and therefore are professionally capable and trustworthy.

The public is not discriminating. Those who are ill and are seemingly not benefited by treatment generally drift into the offices of the quacks, whose appeals to the imagination are convincing and even inspiring. The membership roll of the city, county or district medical society should be published regularly or periodically in the press. Every member of the society should print on his card, his prescription blank and his letter head a note stating that he is a member of the society and he should display a printed membership, placard, framed, in his office.

It would be legitimate and beneficial advertising to advertise the medical society and thus designate the quacks and educate the people to the fact that they cannot patronize any but members of the medical society except at their own risk. Quacks would soon be put out of business with clever advertising of this kind.

We agree with this editorial writer. When you pay your dues, each year, a membership certificate is sent you. Frame it. Place it in a conspicuous place in your office. We quite agree also with the desirability of recording your medical affiliation on your prescription blanks. Would it not be well to advertise our medical society membership in this manner? Let us make the experiment.

DUES—IMPORTANT NOTICE

Our members' special attention is directed to a communication that will be found in our correspondence column. Secretaries of County Societies will also please note the need that this communication demands prompt action. Michigan does not wish to lose any of its A. M. A. delegates. So please pay your dues promptly and give your Secretary time to get them in before April 1st.

REGIONAL POST-GRADUATE CLINICS

In his annual report, the secretary advanced recommendations for Regional Post-Graduate Clinics. See February Journal containing minutes of the Council meeting. The Council approved the principles and purposes of the plan and recommended that the President ap-

point a special committee to outline and institute the work.

In compliance with this recommendation President Connor has appointed the following committee:

W. J. Wilson, Detroit, chairman.
R. J. Hutchinson, Grand Rapids.
L. M. Warfield, Ann Arbor.
F. M. Harkin, Marqquette.
R. M. McKean, Detroit.

SECTION OFFICERS

Please note this announcement:

The Scientific Committee of the State Society is composed of the President and Secretary of the State Society and the Chairman and Secretary of each section and is charged with the preparation of the scientific program of the sections for our Annual Meeting that is to be held in Mt. Clemens in September.

In order that there may be a close relationship between the several sections and that a valuable program be created for our Annual Meeting, it is directed by President Connor that a meeting of the Scientific Committee be held in Kalamazoo at 10.00 a. m. on April 16th. You are urged to be present at this meeting.

The date of April 16th and the place at Kalamazoo have been selected for the reason that on that day, at noon, there will be a meeting of the Joint Committee on Public Health Education and that afternoon there will be a conference of all the Secretaries of the County Societies called by the Council.

Please mark this date on your calendar and make it a point to be present.

COUNTY SECRETARIES

A conference of all County Secretaries will be held at noon, April 16th, in Kalamazoo. The Joint Committee on Public Health Education will meet with you at luncheon. In the afternoon there will be a general discussion of organizational work. The details of the program are being prepared by a committee of the council and will be announced in our next issue. We want you to note and reserve the date.

DIPHTHERIA-ANTITOXIN—A CORRECTION

The quoted correspondence is self-explanatory. We are glad to make the correction and trust that this added publicity will serve to increase the efforts to reduce the diphtheria deaths in Michigan:

Editor of the Journal of the Michigan State Medical Society:

In reading the editorial on Diphtheria in the February issue of the Journal I notice a serious mistake, to which I feel it my duty to call your attention. I refer to the dosage of antitoxin. You have listed the intravenous dose at from two to six times the size of the intramuscular dose. This is undoubtedly a stenographic or printer's error, but it might prove serious should an uninformed physician follow from figures.

I might also add that the Schick test is, according to Park, no longer used preliminary to toxin-antitoxin immunization.

I feel that for the sake of the children these errors should be corrected in a subsequent issue of the Journal.

Very truly yours,
J. D. Brook.

Dear Dr. Brook:

Thank you for your letter of the fourth. I am still in the dark in regard to a dosage of antitoxin, especially the intravenous. The table given in that editorial was taken from a bulletin of the New York State Board of Health and the figures given were as imparted in that bulletin and Doctor W. H. Park is quoted as the authority for those figures. At the time I read it I thought these doses were somewhat large, but with such an authority I did not question it, and also coming from the New York Commission of Health, I concluded that it must be correct. I referred to the figures again and find that they are published as given in that bulletin.

I am going to take the liberty of referring the editorial and your letter to Doctor Slemons and ask him for a communication upon the matter. If these figures I have quoted are wrong, I shall then be glad to make correction in the next issue of the Journal, together with your and Doctor Slemon's letter in connection with the editorial.

As far as the Shick test is concerned, I recognize that it has been considered as impractical and that the toxin-antitoxin immunibation is given regardless of the Shick test. I mention it merely because in some quarters some men still associate the two measures.

The purpose of the editorial is to induce doctors to be alert to these sore throats and to give full dosage of antitoxin. You know there are many who still rely upon 500 units and think that they have given a large dose when they have administered 2,000 units.

I am glad, however, to have you raise this question because we want to be right as many times as possible and I hope that in the future we may have the benefit of your advice in connection with similar editorial comments.

Yours very truly,
F. C Warnshuis.

Dear Dr. Slemons:

I am referring to your attention the enclosed letter from Dr. Brook and also my reply.

Will you please refer to the editorial in the February Journal and then advise me, returning the correspondence?

Thanking you, I am

Yours very truly,
F. C. Warnshuis,
Secretary-Editor.

Editor of the Journal of the Michigan State Medical Society.

Inclosed please find what Dr. Park recommended in 1921 in regard to the amount of antitoxin to be used in the treatment of a case of diphtheria and how the same should be used.

The article in the Journal regarding the dosage is wrong due to the fact that in quoting what Dr. Park has said, someone forgot to state that when used intravenously the smaller amounts recommended should be used. You can readily understand that this makes the table as published

in the last Journal read entirely different than it appeared.

I think it wise for you to advise the profession if anti-toxin is given intravenously that it should be highly potent, show no turbidity, warmed to body temperature, and given very slowly. Dr. Park, if I remember correctly, recommends that one minute should be allowed for the injection of each cubic contimeter. I believe also that the best practice today advises that anti-toxin should never be given in less than 10,000 unit doses.

If I can be of any other assistance to you, kindly let me know.

Reasons for my delay in answering are it took me several days to get a copy of the Journal, mine having been mislaid and also to the fact that I have been away from the city.

Very truly,
C. C. Slemons, M. D.

AMOUNT OF ANTITOXIN IN THE TREATMENT OF A CASE

	Mild Units	Early Mod. Units	Late Mod. and Early Severe Units	Severe and Malg't Units
Infants 10-30 lbs, under 2 years	2,000 to 3,000	3,000 to 5,000	5,000 to 10,000	7,500 to 10,000
Children, 30-90 lbs., under 15 years	3,000 to 4,000	4,000 to 10,000	10,000 to 15,000	20,000 to 20,000
Adults, 90 lbs and over	3,000 to 5,000	10,000 to 10,000	15,000 to 20,000	20,000 to 50,000

The above dosage is to be given intramuscularly.

	Late Mod. & Early Sev.	Severe and Malg't
Infants, 10-30 lbs under 2 years	5,000	7,500
Children, 30-90 lbs under 15 years	10,000	10,000
Adults, 90 lbs. and over	10,000	10,000

The above dosage to be given intravenously.

Editorial Comments

Well, now we have a Mah Jongg dematitis to worry about. A number of cases have been reported. In reality, it is a dermatitis venata caused by the lacquer on the boxes of Mah Jongg sets. The Chinese and Japanese employ as a varnish in their lacquer work, an extract of Rhus Vernix. Shortly after the infection exposure there is a burning and pruritis with eythema, and later, swelling, edema, vesicles and bullae. The treatment is the same as for poison ivy.

One of the large insurance companies that carries some fifteen million industrial policies, presents some pertinent statistical figures as to deaths among this class of patients that represents one-seventh of our population. It's annual death rate is 8.9 per 1,000. Of special note is the decline of diphtheria of 15.2 per 100,000 in comparison to 30.8 in 1922. Diseases incidental to pregnancy reveals a death rate of 17.9 per 100,000. Measles, influenza, pneumonia, heart disease and whooping cough had an increased death rate, while tuberculosis and typhoid fever was decreased.

Dr. Ray Lyman Wilbur, President of the A. M. A., recently addressed several medical meetings in various parts of the country. Dr. Wilbur is a tall, gaunt, Lincolnesque type of a man with a wonderful personality and an impressing earnestness of purpose. He commands respect and admiration. He is clear in his expression, keen in perceptive and expertly sound in his conclusions. We quote a few of his comments and expressions:

"Our greatest error has been in not carrying the public along. Our progress has been too rapid for understanding by the public. Sometimes our progress is too rapid for assimilation by ourselves."

"We must sell ourselves and our knowledge to our public."

"We are well organized. We have demanded better education of our profession. We must work out a plan to offer what we know to the public. We must assume the offensive. We have been defensive too long."

"Think of all the events that have gone around and about us during our own generation, any one of which would have characterized one generation in medical history. It is better to practice medicine one year right than forty years wrong."

"The social responsibilities of the profession are enormous. Are we going to fit in or be fitted? We must face, meet, and control these situations. The social aspects of medicine are inevitable,"

"Bringing in the laboratory has crowded out the clinical senses. We must understand how to get our hands upon the patient. The personal touch is essential. We must put back into medicine the personal element. The distant approach through the laboratory is ruinous to the confidential relationship of patient and physician."

"The dramatic discoveries of the laboratory have numbed the talents of the five senses."

"A well trained doctor should arrive at a diagnosis in a bathing suit. The tendency is to come in a diver's suit with aparatus, compressed air and much assistance."

"We need to smash the present curriculum and revamp it to bring it up to the medical requirements of modern knowledge. Pre-medical courses should be reconstructed. Present courses are in some ways ridiculous. We now take twenty-five years of the life of the best young men in the country preparing them to become physicians. We standardize the work so that when they have finished they are all alike. We prescribe that they shall have so many hours of this and so many hours of that. What we need is to make courses more elastic and elective, so that men who are philosophers, chemists and psychologists, may enter the profession and bring with them their different viewpoints. The science of medicine is changing, and we cannot dam the stream at one point and prescribe certain things."

In these quotations there is contained much for thought and considerate action. Ponder over them.

April 16th, Kalamazoo—This is an important date on which the following meetings well be held:

Ten a. m., meeting of the Scientific Committee, to arrange for the Annual Meeting, section programs; 12 m., meeting of Joint Committee on Public Health Education with the County Secretaries; 2 p. m., conference of County Secretaries with the Council.

The doctors, dentists and druggists of Lansing had a Leap Year party on February 12th. Splendid idea and one that might well be followed in other communities. All three professions have mutual interests. All three have some common

problems. Individually each profession may achieve certain ends but unitedly and in fraternity their welfare and interests will be greater if they co-mingle in pleasure and professional activity. We are glad it is Leap Year for possibly the women can put it over better than us busy men. We suggest that you let them try it.

The coming session of the American Medical Association that is to be held in Chicago the week of June 9th, promises to record the largest registration ever attained. A scientific program of exceptional interest and value is assured. Michigan should be well represented at this annual meeting. The main question now is to secure hotel accommodations. It is none to early to write for hotel reservations. We urge that you attend to this during the fore part of this month in order that you may not be disappointed. Incidentally, but of importance, is the fact that if you are not a fellow you should send in your application at this time. Fellowship in the national association is an obligation that you owe. Write to Dr. Olin West, Secretary, 535 N. Dearborn St., Chicago, and secure an application blank. There are at least 500 Michigan Doctors who should be Fellows of the A. M. A. Affiliate now.

"The incompetent or unprincipled physician, licensed to practice medicine by too complaisant state, is the greatest menace to scientific medicine —as great a menace as all the cultists put together."—Fishbein.

The following from the Red Book Magazine for January merits reflection:

At luncheon I happened to mention that I needed a new bag.

"Where do you intend to buy it?" my companion asked. I gave the name of a well-known Fifth Avenue shop.

"That's absurd!" he exclaimed. "Nobody with any sense pays full price for things in this town. Tell you what: I've got a friend in the business. We'll just jump into a taxi and run down to his place. He'll fix you up right."

The taxi carried us down to the wholesale district at a cost of a dollar and forty cents.

We entered a shabby building with dirty windows, and asked for the "friend," who happened to be out of town. However, another man came forward and voluntered to fix us up right.

For about an hour we rummaged through that dusty loft, examining bags, none of which really suited me. But I felt under obligation and eventually purchased one, waited while it was sent across the street to be marked, and then carried it uptown—all of which consumed the best part of the afternoon.

It was four o'clock when we dismissed the second taxi. I had paid out three dollars, wasted three hours and bought a bag which I didn't want. But I had proved my shrewdness. Through a friend in the business I had bought cheap.

Six months later, when that second-rate article began to show its lack of real stuff, I chucked it into the ash can, and went over to the Fifth Avenue shop and bought the bag I had wanted in the first place. I paid a high price, which will be a low price in the end, as I expect to carry the bag the rest of my life.

In buying a piece of jewelry I had an interesting experience. After asking prices in various second-rate shops, I summoned courage to step into a store whose name was famous around the world.

To my surprise, the price was actually lower—and there was no suspicion about the quality.

Similarly, in dealing with doctors, I have learned that the best ones charge less in proportion to what they give—for they speak with authority.

All this sounds elementary, but the instinct to beat the game is strong in all of us. It tickles our self-esteem to think that we have got something cheap.

My own conviction is that the only way to get things cheap is to pay the price of the highest quality—that, generally speaking, those men and institutions which have the biggest reputation have gained that reputation by delivering the biggest value per dollar.

They are everybody's friend in the business. And you don't have to hunt them up in dusty lofts, or know a brother-in-law of somebody who went to school with their cousin, in order to have them fix you up right.

Dr. Roger V. Walker, 1320 David Whitney Building, Detroit, has been designated by the Wayne County Medical Society as Journal correspondent. Members in and about Detroit are requested to report all news items and meetings to Dr. Walker, who will forward them in time for publication in each issue of the Journal.

Don't forget to file your income tax report before March 15th. Likewise do not neglect to make deductions for the following expenses: taxes, depreciation on library, instruments, equipment, automobile and furniture; expense of supplies auto, drugs, telephone, rent, salaries, electricity, heat, water or any other expense required to do business. Railroad fare to medical meetings is not deductable. Twenty per cent on instruments, 10 to 15 per cent on libraries and 10 per cent on furniture are reasonable deductions. Amounts paid for laboratory work is also deductable.

It is discouraging to continue to comment, suggest and invite opinions month after month and not get a "peep" from our members. We do not desire boquets —just boost the good things to the other fellow. We do desire your opinions and suggestions as well as experiences. We want them for our Correspondence Column. The Journal is your forum. Please get up and speak in it at least once in awhile and let your associates know what you are thinking about and what you desire. Your interest will aid in making a better Journal. Sit down tonight and let us have an expression from you on some timely subject or some personal experience.

According to figures issued by the Department of Health during 1919-1920-1921, the deaths of mothers following child birth was caused by: Septicemia, 39.1 per cent; albuminuria, 19 per cent; accidents, 15.3 per cent; hemorrhage, 9.8 per cent; phlegmasia, 4 per cent; following birth, 6 per cent. Not a very good record, but not an indictment against the profession because no statement is made as to how many of these cases were attended by doctors.

We have some 3,000 members affiliated with our State Society. It is reasonable to estimate that the average income of all the members is $3,000 per year. Consequently the membership of our society does a nine million dollar business per year. Would any other profession or industry limit its appropriation for current expenses to $15,000 per year to safeguard such a volume of business and conserve the rights of those who produce that nine million income? Well, that's just what we doctors of Michigan are doing. There is but one alternative—increased dues, if you desire increased benefits and protection.

Correspondence

Editor of the Journal of the Michigan State Medical Society:

The United States Public Health Service takes pleasure in announcing that, in response to an extensive demand for summer school work in public health, it has arranged with Columbia University, the University of California, the University of Michigan and the University of Iowa to conduct public health summer schools this year.

The faculties of these various summer schools will include many such leading specialists of the United States as Michael M. Davis (dispensary management), Robert H. Gault (criminal psychiatry), Emery Hayhurst (industrial hygiene), William J. Mayo (non-communicable diseases), E. V. McCollum and H. C. Sherman (nutrition), William H. Park (laboratory methods), Earl B. Phelps and George C. Whipple (public health engineering), M. J. Rosenau and Victor C. Vaughan (epidemiology), Thomas W. Salmon (psychotherapy), C. E. A. Winslow (public health administration) and Francis Carter Wood (cancer).

The Public Health Service has already received communication from several thousand physicians and sanitarians who hope to attend these summer schools. The widespread interest manifested thus early indicates that a large number will take advantage of this opportunity.

Yours very truly,
H. S. Cumming,
Surgeon General.

Editor of the Journal of the Michigan State Medical Society:

You probably know that the National Health Council has launched a campaign for periodic Health Examinations. Co-incident with this the Metropolitan Life Insurance Company has produced an excellent motion picture entitled "Working for Dear Life." A description of the film is contained in the enclosed folder.

The value of this film is indicated in the review made by the Health Films Committee, of the Council; a copy of which is attached.

We are prepared to send this film free, except for transportation charges, to Health Associations and other organizations desiring it. We are naturally interested in getting as wide a distribution as possible.

Any publicity which may be given to this matter in your publication will be appreciated.

Very truly yours,
Lee H. Frankel
Third Vice-President.

Mr. W. R. Uhlemann of the Uhlemann Optical Company, Chicago, called me over and told me his Company was the first (I think he said there are now only five in the United States) to advertise "For Oculists Exclusively." He says it may put them out of business, because they refuse to sell goods to optometrists and have lost an immense volume of trade. He thinks we really do wrong to advertise wholesale or other optical companies which sell to optometrists. He especially thinks that all occulists should patronize by preference houses that try to maintain ethical standards which physicians are so rigid in upholding.

We are enclosing a reprint of one of Mr. Uhlemann's talks to the Rotary Club of Elgin. If you can see any way you can help Uhlemann to maintain the standards they have adopted, either by publication of what he said or by writing him a letter of commendation, to demonstrate your approval of his position, the Uhlemann Company will appreciate your co-operation.

Yours very truly,
E. W. Mattson,
Manager, Co-operative Medical Advertising Bureau.

Editor of the Journal of the Michigan State Medical Society:

Section 3, Article V, of the Constitution of the American Medical Association reads:

Sec. 3.—The total voting membership of the House of Delegates shall not exceed 150. The medical departments of the Army and the Navy, and the United States Public Health Service and the scientific sections shall each be entitled to one delegate, and the remainder shall be appropriated among the Constituent Associations in proportion to their actual active membership as hereinafter provided in the By-Laws.

Section 3, Chapter I, of the By-Laws of the American Medical Association reads:

Sec. 3. APPOINTMENT OF DELEGATES.—At the annual session of 1903, and every third year thereafter, the House of Delegates shall appoint a committee of five on reappointment, of which the Speaker and the Secretary shall be members. The committee shall apportion the delegates among the constituent associations in accordance with Article 5, Section 3, of the Constitution, and in proportion to the membership of each constituent association as recorded in the office of the Secretary of the American Medical Association on April 1 of the year in which the apportionment is made. This apportionment shall take effect at the next succeeding annual session, and shall prevail until the next triennial apportionment, whether the membership of the constituent association shall increase or decrease.

The last reapportionment of delegates was effected at the Seventy-Second Annual Session, held at Boston in 1921. Another re-apportionment will, therefore, be made at the Seventy-Fifth Annual Session of the Association to be held in Chicago, June 9-13, 1924. As the reapportionment will be made on the basis of the membership in constituent associations, **as that membership has been reported and recorded on the membership records of the American Medical Association on April 1, 1924,** it is important that this official shall have complete reports of the membership of your association so that the names of all members may be duly recorded in this office **before April 1, 1924.**

This matter is brought to your attention now in order that you may remind the Secretaries of your component county medical societies of the need of the fullest possible reports of membership in their respective organizations.

Delegates already elected or to be elected for service in the House of Delegates for the Seventy-Fifth Annual Session of the American Medical Association in June, 1924, will be in no way affected by the reapportionment to be made in Chicago.

On January 1, 1924, the membership of the American Medical Association, which, of course, is the combined membership of its constituent state and territorial associations, was 89,835. It is sincerely hoped that this splendid membership will be maintained and even increased by the affiliation of desirable and eligible physiciatns and that the membership in your state will be maintained at a figure that will insure that there will be no re-

duction of representation in the House of Delegates.

Very truly yours,
Olin West,
Secretary.

Editor of the Journal of the Michigan State Medical Society:

A few months ago we completed a careful revision of "Formulas for Infant Feeding" and as it represents the best efforts thus far attempted to state clearly the theory and practical application of the Mellin's Food Method of Milk Modification, we believe you will welcome an opportunity to review this work. We are, therefore, enclosing a copy for your attention.

The contents of this book will undoubtedly be approved by every physician who is interested in infant feeding, for the matter set forth is in accord with the generally accepted principles and teachings of today.

We hope you will be interested in the book and perhaps in its contents will be found an answer to many questions relative to Mellin's Food which have not heretofore been perfectly clear to you.

Yours very truly.
Mellin's Food Company,
Howard Goodwin.

State News Notes

COLLECTIONS

Physicians' Bills and Hospital Accounts collected anywhere in Michigan. H. C. VanAken, Lawyer, 309 Post Building, Battle Creek, Michigan. Reference any Bank in Battle Creek.

Owing to illness in physician's family one of the finest general practices in Detroit will be sold. Cash income exceeds $20,000 yearly. Location ideal. Equipment and furnishings the best. Competition negligible. Sale price at equipment invoice only is $5,000. Included are all home furnishings in situ., valuable appointments and a thorough introduction. Packard coupe optional. Lady office assistant knows entire clientele and will remain if desired.

Fees are excellent. No night calls and no confinements except at hospital. Surgical field unlimited. Ideal place for country physician of personality and ability who wants a wider field.

This is a real opportunity. No answer desired unless you are a successful physician, can come and investigate and have the money .

Possession given anytime between May 1st and July 1st. C/O Journal.

$12,000 Misouri Practice Free—Wonderful location—General practice—25 per cent collections. Good opening for small hospital. Overwork causes me to have to sacrifice proposition. Buy office effects and take location.—Address Journal.

Dr. W. H. Kay, Lapeer, Mich, who was recently operated on at Hurley Hospital, returned home much improved.

Dr. C. H. O'Neil, recently appointed as School Trustee.

Dr. Hugh A. Stewart has recently announced his candidacy for Lieutenant Governor at the coming primaries.

State Nurse Association holding their annual convention at the Hotel Durant the week beginning February 11th.

Dr. E. H. Sichler is reported to be spending an enjoyable month in the south.

Dr. and Mrs. George E. McKean are down at Miami and are later going to Pinehurst before returning north.

A very successful Clinic was given by the staff of the Detroit Receiving Hospital and the faculty of the Detroit College of Medicine and Surgery on Wednesday, January 24, 1924. In the evening a subscription dinner was given by the Alumni Association of the Detroit College of Medicine and Surgery at the Wolverine Hotel, Detroit. Dr. Hugh Cabot, Dean of the University of Michigan Medical School, gave a very interesting address.

Dr. Arthur D. Holmes is on a trip to the West Indies with a party of Detroit men.

The medical branch of the Detroit Public Library now occupies the entire first floor of the Mullet Street building of the Detroit College of Medicine and Surgery. This Library receives an annual appropriation from the city for its maintenance, is in charge of a trained librarian, and is available to all citizens as well as the profession, and medical students of the college.

Dr. and Mrs. Frank B. Walker of Detroit, are spending a month in Florida.

The department of physiology now occupies the entire second floor and the department of Biological chemistry all of the third floor of the Mullet Street building of the Detroit College of Medicine and Surgery.

Dr. Walter H. MacCracken, Dean of the Detroit College of Medicine and Surgery, has returned from a trip to California. His daughter, Dr. Frances MacCracken, who went west with him, is not expected back until the early spring.

Dr. Clyde H. Halsey, who was formerly associated with the department of roentgenology of the University of Michigan Hospital, is now associated with Doctors Hickey, Evans, and Reynolds.

Dr. and Mrs. F. J. Maquire, of Detroit, are spending a month at Palm Beach.

Dr. H. W. Plaggemeyer will give a course of lectures at the Women's Hospital of Detroit during February and March, on Urology.

Dr. and Mrs. J. M. Robb, of Detroit, recently returned from a month's vacation at Palm Beach.

The staff at Harper Hospital will give a postgraduate course in disease of the eye, ear, nose and throat. during the month of March.

The engaement of Miss Elizabeth McGratton of Yale, is announced to Dr. Lynn Webber of Detroit.

Dr. Ed D. Plass of Detroit addressed the staff of Blodgett Hospital, Grand Rapids, on February 19th. His subject was: "Eclampsia and It's Conservative Treatment."

Dr. E. V. Joinville of Detroit returned from abroad the middle of February. While in Germany the doctor pursued a special course on diseases of the eye as given by Dr. Fuchs.

Announcement has just been made by E. Fullerton Cook, Chairman of the Revision Committee of the United States Pharmacopoeia that standards for whisky and brandy as medicines will be included in the new Pharmacopoeia now being revised. This is in response to a demand by the physicians of the country.

Under the national prohibition laws, whisky and brandy are classed as medicines and as such are legally prescribed in many cases of serious illness, but at the present time no legal standards exist for their purity.

All physicians of the General Revision Committee, acting as a Sub-committee, were appointed to study the situation and make the necessary action. This Sub-committee has issued the following statements:

"In view of the fact that a large number of physicians in the United States believe alcohol to be a valuable therapeutic agent, and in view of the widespread adulteration of the alcoholic liquors at present available, the members of this Referee Committee feel that for the protection of the public, there should be an official standard for medicinal spirits."

By including standards for whisky and brandy as medicines, in the Pharmacopoeia, which is the legal standard for drugs and medicines under the Food and Drugs Act ,the machinery of the U. S. Department of Agriculture and of the Boards of Health and Boards of Pharmacy throughout the country, is enlisted in protecting the sick against adulterated and poisonous products.

Dr. C. G. Parnall, Superintendent of the University Hospital, Ann Arbor has tendered his resignation.

Dr. C. W. Munger, Superintendent of Blodgett Hospital, Grand Rapids, has resigned. He is succeeded by Dr. Morril, formerly Assistant Superintendent of the University Hospital.

Drs. A. J. Baker, B. R. Corbus and F. J. Larned, Grand Rapids, attended the meeting of the American College of Physicians in St. Louis, Mo.

Dr. R. T. Urquhart, Grand Rapids, was operated on in St. Luke's Hospital, Chicago, on January 26th. Last reports are that he is making a good recovery.

Dr. L. W. Brown, Medical Examiner, Pennsylvania Railroad System, spent several days at headquarters in February.

Dr. J. H. Boulter, Detroit, was elected president of the Canadian Club of Detroit.

The Annual Congress of Medical Education, Licensure, Public Health and Hospitals will be held in Chicago March 3, 4 and 5, in the Congress Hotel.

Dr. B. R. Corbus, Grand Rapids, ,is spending a month in Florida.

Dr. Walter L. Finton and Associates have recently completed and moved into a modern Clinic Building at Jackson.

In addition to the usual specialties, a hydro and physio therapy department for men and another for women has been included.

Deaths

The death of Doctor E. D. Millis, Webberville, has been reported. The Doctor was born November 13, 1857 and died January 10, 1924. He was a graduate of the Detroit College of Medicine.

The death of Dr. Robert B. Honey of Dexter on July 25, 1923 ,has been reported.

Dr. George M. Hull of Ypsilanti was born July 31, 1865 and died December 30, 1923. He was a graduate of the Medical Department of the University of Michigan.

INDIVIDUALIZED LONGEVITY PROMOTION (PRECLENICAL MEDICINE)

Practice of medicine, in its last analysis, aims to promote longevity. William G. Exton, New York (Journal A. M. A., Feb. 23, 1924), says that this function, however is not always recognized by the practitioner, because of his absorption in the labors of alleviating pain and meeting clinical emergencies. As a matter of fact, the profession has been so preoccupied in caring for the sick that important functions of the general practitioner have been left open to usurpation by more or less well intentioned outside agencies, which engage in exploiting those phases of longevity promotion concerned with keeping the well well, and preventing or postponing the development of clinical conditions in the near sick. This work is characterized by the great emphasis laid on personal health values to be gained by as wide an application as possible of personal hygiene, prophylaxis, prevention, and eventually also of earlier or, as Sir James Mackenzie puts it, "predispositional diagnosis." A few of the most definite impressions received from a study of the seven years' experience of the Prudential Insurance Company in providing its policy-holders with urinalyses are set forth by Exton. The persons who have made use of preclinical service are: prudent, healthy persons; prudent persons who think themselves healthy but, nevertheless, have impairments; well and near-well persons, who believe themselves more or less sick; well persons, who think of their health only when bothered with some acute or self-limiting condition, such as boils or colds; persons with obstinate or chronic com-

plaints who are inexperienced, careless, easily discouraged or unfortunate in not having fallen into the right hands. In Exton's opinion one of the reasons preclinical medicine has not yet received from practitioners the scientific attention which it deserves lies in the embarrassment on the part of many by a sort of financial complex involved in asking patients to come for examinations which mean additional fees that some patients may think unnecessary. It is pointed out that this difficulty will disappear as the public becomes more educated with regard to preclinical medicine, and that the general practitioner has more power than any one else to accelerate progress. Another reason seems to be connected with the character of the literature of health examinations, which savors of salesmanship and teems with superficialities that carry no appeal to the critical or scientifically minded. It cannot be too strongly emphasized, therefore, that this new development rests securely on a scientific basis than which none is firmer; namely, common knowledge and experience. A health examination cannot be regarded as other than a scientific and prudent procedure deserving of the careful attention and active interest of every well meaning physician. No matter how thorough or technically correct an examination is made, the utmost result that can be expected of it is limited to the efficiency of the physician selected by a patient to treat him, and treatment can be effective only to the extent of the correctness of the physician's diagnosis. The physician who does not teach and encourage the habit of periodic examinations among his patients should be prepared to accept with equanimity the relegation of this phase of practice to outside agencies, because nothing is more certain than that preclinical medicine is bound to increase in scope and importance. If all the information about a person gleaned from periodic examinations made during years of health is in the keeping of the attending physician when illness comes, it is not lost at a time when it may prove to be the controlling guide to correct diagnosis and successful treatment. Undoubtedly, the type of examination for the presumably healthy will change with experience, wider usage and increasing familiarity on the part of laity and profession. Certainly new discoveries will influence the technic, which has nothing mysterious about it. The gist of preclinical medicine lies in paying attention to minor complaints and observations which have hitherto not been of absorbing interest to those who have considered themselves only properly concerned with active illness, because only by knowing the habits and everyday experiences of an individual is it possible to correct and prevent tendencies to malfunction and organic disease. The potentialities and scientific progress of preclinical medicine depend on the realization that health examinations are not mere isolated procedures, and that their chief significance lies in the principle of continuous care of the individual. Preclinical medicine is destined to grow in scope and importance, and the duty of thwarting the formation of an artificial and unscientific gap between health and disease rests squarely on the practitioners of the country. They alone are in a position to make effective the benefits which must result from that broader and closer contact between public and profession, which is at one and the same time the greatest present need of both and the essence of preclinical medicine.

County Society News

CALHOUN COUNTY

MINUTES

The first regular meeting of the Calhoun County Medical Society was called to order by Vice-President Kingsley in the Bridge Room of the Post Tavern, Tuesday, January 8th, at 8:05 p. m.

Dr. Harry Knapp moved that the minutes of the Annual Meeting be approved as printed in the Bulletin. The motion was seconded and carried.

The following bills were read: Phoenix Printing Co., December Bulletin, $11.00; Dr. Squier, mailing Bulletin, $1.16; postage, $32. After approval by the Board of Directors present, it was moved by Dr. Godfrey and seconded by Dr. Eaton, that the bills be paid. The motion was carried.

Dr. George Hafford suggested that inasmuch as Dr. Grant was permanently located in Albion, his application for membership be acted upon, and taken from the table, the rules be suspended and the secretary be instructed to cast the unanimous ballot of the Society for Dr. Grant for membership. Seconded by Dr. Godfrey and carried.

The application for membership of Dr. J. R. Jeffrey was presented for first reading. This application was recommended by Dr. Eggleston.

Dr. George Hafford then introduced the speaker of the evening, Dr. C. G. Darling, of Ann Arbor, who talked on "The Spleen." Discussion was opened by Dr. Kingsley, followed by Drs. Hafford, Eggleston, Knapp and Winslow.

Following the discussion Dr. Gorsline expressed to to Dr. Darling the high esteem in which he was held by the medical profession at large. As a token of this esteem he was presented with a book in which the sentiment was endorsed by the members of the Society.

Dr. Gubbins moved that the felicitations of the Society be extended to Dr. Haynes and his wife and that the Vice-President and Secretary, together draft a letter expressing this sentiment to Dr. Haynes. Seconded by Dr. Sleight and carried.

It was moved, seconded and carried that the meeting adjourn.

Attendance at the dinner, 33; at the meeting, 42.

GRATIOT-ISABELLA-CLARE COUNTY

The Annual Meeting of the G. I. C. which was called for December 13, and postponed to January

24th, was held in the Alma City Hall. Dr. I. N. Brainerd read a paper on Tubercular Peritonitis, this was discussed by Dr. T. J. Carney and M. F. Brondstetter.

Dr. C. F. DuBois then made a report of his survey of the Alma Schools and Alma College, showing an average of 40 per cent of the pupils have goiter.

The following were elected officers for 1924: President R. B. Smith, Alma; Vice-President, M. C. Hubbard, Vestaburg; Secretary, E. M. Highfield, Riversdale.

E. M. Highfield, Secretary.

BAY COUNTY

At the Annual Meeting held December 10, 1923, Dr. E. C. Warren, retiring President tendered the members a complimentary banquet at the Wenonah Hotel. The speaker of the evening was Rev. J. B. Pengelly of Flint. He gave a very forceful address on "The Present Day Outlook: A Uew Dark Age or a New Renaissance."

The following officers were elected for the coming year:

President, Dr. P. R. Urmston Vice-President, Dr. C. A. Traphagen; Secretary-Treasurer, Dr. L. Fernald Foster; Medico-Legal Adviser, Dr. A. W. Herrick.

The annual dues were raised from $8 to $10.

Dr. G. W. Trumble was given an honorable transfer to the Genessee County Society.

The resume of the years work showed a very prosperous and active administration. The programs were among the most interesting ever given.

The big meeting of the year was the one addressed by Dr. Banting of Toronto, over 200 being in attendance.

L. Fernald Foster, M. D., Secretary.

BERRIEN COUNTY

The following officers have been elected for 1924 for Berrien County:

President, R. H. Snowden, Buchanan, and Secretary, R. B. Howard, Benton Harbor.

HOUGHTON COUNTY

The Houghton County Medical Society held its regular monthly meeting at the Miscowanbils Club at Calumet, February 5, 1924. Owing to the severe weather, not many members were in attendance.

A committee of Doctors Bourland and Gregg was appointed to draw up resolutions over the death of Dr. Davis of Calumet. The report of the auditing committee was read and approved.

It was voted by the society to invite Dr. Olin of the State Board of Health to our next regular meeting in March, which will be on the subject of goitre.

Dr. W. T. S. Gregg of the C. and H. Staff, presented a very interesting and instructive paper on "Sprains of the Knee." He also presented three cases which had been operated and the various cases were fully discussed by those present. Quite a number have paid their dues for 1924 and those who have not are urged to do so before April 1st, the last day of grace. We wish to urge a full attendance at our next meeting, March 4th, when the entire subject of goitre will be covered.

Respectfully,

G. C. Stewart, M. D.

Secretary.

INGHAM COUNTY

The Michigan Department of Health will furnish the program for the meeting of the Ingham County Medical Society in Room 703, New State Building, on Friday, February 15, at 7:30 p. m.

(1) Goiter Survey of Four Counties of Michigan and General Summary of Goiter Problem—By Dr. R. M. Olin, Commissioner of Health.

(2) Review of the Work Done by the Laboratory of the Michigan Department of Health for Ingham County Physicians in the Year 1923—By Dr. C. C. Young, Director of Laboratories. Fifteen minutes.

(3) Demonstration of the Kahn Precipitation Test—By Dr. R. L. Kahn, Immunologist. Fifteen minutes.

Max Wershow, Sec'y.-Treas.

KALAMAZOO-ALLEGAN-VAN BUREN COUNTY

At the annual meeting of the Kalamazoo Academy of Medicine the following officers were elected:

President, Dr. N. L. Goodrich, South Haven; first vice-president, Dr. W. E. Collins, Kalamazoo; second vice-president, C. A. Bartholomew, Martin; third vice-president, Dr. R. U. Adams, Kalamazoo; secretary, Dr. W. G. Hoebeke, Kalamazoo; treasurer, Dr. S. U. Gregg, Kalamazoo; councilor, Dr. J. B. Jackson, Kalamazoo; librarian, Dr. C. A. Youngs, Kalamazoo; board of censors, three years—Doctors O. D. Hudnutt, L. V. Rogers; Delegates to the State Society, Doctors L. J. Crum, W. den Blyker, C. A. Youngs; Alternates to the State Society, Doctors C. L. Bennett, C. Gillette, L. E. Westcott.

W. G. Hoebeke, Secretary.

GENESEE COUNTY

The Genesee County Medical Society, believing that the medical profession is bearing an excessive tax burden, at a regular meeting held on Feb. 6, 1924, adopted the following resolutions:

Be It Resolved, That this Society protests against the excessive taxation imposed upon the profession by the Harrison Narcotic Act as amended in 1918, inasmuch as the tax collected from this source is greatly in excess of the amount necessary for the enforcement of this law ($610.311.13).

Be It Further Resolved, That this Society considers that occasional post-graduate studies are necessary for all progressive physicians, and that any expense so incurred should be deductable as a legitimate expense.

Be It Further Resolved, That this Society believes that a physician should be allowed to deduct the expenses incurred in attending the professional societies to which he belongs. The present ruling penalizes a doctor for attending such society meetings. We believe the community at large benefits by the increased skill and knowledge of the doctors who regularly attend state, national and special societies.

Be It Further Resolved, That this Society is in favor of the reduction of tax rate on earned incomes. The taxation on earned incomes at the same rate as on incomes derived from investments is in reality a tax on the productive activity of the professional man.

Be It Further Resolved, That a copy of the above resolutions be sent to our local senators and representatives, as well as to the Journal of the Michigan State Medical Society.

The Journal
OF THE
Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

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Original Articles

*MODERN HEALTH EDUCATION IN THE PUBLIC SCHOOLS

ANDREW P. BIDDLE, M. D., F. R. C. P.
(Member of the Board of Education, City of Detroit.)

DETROIT, MICH.

Modern education in large cities means mass education. The complexities of modern life demand a broader vision for their solution. Play grounds do not naturally exist any more, they must be formed. The streets are too dangerous and lots not sufficient for the exercise of the multitudes of children; play grounds must be created. Means for proper exercise must be found.

The character of health education, as of all education, depends upon the ideals of human excellence which happens to prevail at the moment.

We live in an age of industrialism, of great nervous strain, of intensive activity, competition, and immense give-and-take. The man we admire most in a social order so characteristic is one of tremendous vitality, keen mind, ready hand, sound character, ideals, and ambition. One who can work hard, play hard, study, laugh, grow in tolerance and understanding, look at life squarely, and keep his balance is the one who has attained excellence, according to our standards.

It is hard to live under these conditions. Such a system makes big demands upon people in the way of mental and physical equipment.

The point is that the education process must be of such a character that it will develop men and women fit to take their places in the existing social order. At the basis of all these desirable qualities is *health.* Without *it* there can be no vitality, no perspective, no fun in living. The man without health is soured. He sees things out of their proper relationships; his disposition is warped. He is lowered in efficiency. He is neither a good workman nor companion; citizen nor neighbor. Since health is one of the first essentials, health education must be a part of the school curriculum, and now, as always, has both its purpose and its method prescribed by the demands of society.

EVOLUTION OF HEALTH EDUCATION

What we know as health education today has had a long evolution. It is a descendent of physical education which, like so many of our educational forms and activities, was originally a European importation. It has gone through many ages.

The first educational system we know anything about—the Grecian—was fundamentally physical. Through games and exercises the Spartan and Athenian boys were inspired with the ideals of good citizenship and were trained for the highest activity of the time, participation in the affairs of the state. Nearly half of the school life of the Grecian boy was spent in sports and games.

GRECIAN METHODS

But the physical education of the ancient Greeks, their system of harmonious bodily development, health, and moral control had undergone the changes wrought by the monastic system of the middle ages. The change from pagan to Christian philosophy had necessitated changes in the educational system. To the early Christians the physical emotions were the creation of Satan and in direct opposition to the soul which alone was Godly. All education directed itself toward preparation for the life to come and since the body was diabolic, education took no regard of it except as an object of mortification. That is why the bodily torture continued to be so general all through the early period of our history.

In the ascetic atmosphere of the monasteries nothing in the way of physical culture could find encouragement. For many years, as a result, the only physical education in existence was that given to the sons of noblemen in the feudal system. This was

*Delivered under the auspices of the St. Clair County Medical Society to the Members of the Society, invited Teachers, Nurses, Dentists and others interested, Feb. 28, 1924.

essentially training for war, since, as you know, the chief occupation of the feudal knight was fighting. We regard the age of chivalry more as a bright spot of romance in the history of our development than as a source of educational ideas. However, something of the knights' physical training in altered form, it is true, did find its way into the system of physical education as it had developed at the time of its introduction into the United States. In fact, in the first phase of physical education in this country, military drill was held in high regard.

EUROPEAN

After the passing of the feudal system, war continued to be the chief occupation of nations. For its successful pursual endurance, sturdiness of body, sound health were most necessary qualities in the fighters. The Germans, under Jahn, developed their system of heavy gymnastics, with the idea of developing physically and promoting their health. After the German Revolution refugees carried their system to other countries and for a time it had enthusiastic followers.

Up to about 1830, the year in which physical education was introduced into the United States, the foregoing marked the main lines of development in Europe. In this country the European product was changed to fit conditions here. The first form of physical education, as I have said, was military drill, introduced by Captain Alden Partridge, into the military academies of his founding. For several years interest in his system ran high, but it died out after a time and the pendulum of public demand swung to the German system. By this time Beck, Follen, and Lieber, university trained refugees from Prussia, had introduced the Jahn system and founded the first public gymnasia in the United States.

AMERICAN

Two other forms of physisal training held the stage for a short time during this first period—manual labor, and calisthenics for girls. Miss Beecher introduced the latter into her schools in Hartford and Cincinnati in about 1828 and wrote a little manual which was used by teachers throughout the country long after her system had been displaced by those which followed.

In 1861, a man named Dio Lewis, established a Normal Institute for Physical Education in Boston. He had a system of "new gymnastics" which he exploited with much success during his life, but it was largely his own enthusiasm which gave it success and when he died interest died with him.

Until 1880 there was little done in the way of physical education. There was no public demand for it. In that year, the third era was ushered in by the introduction of the Swedish, or Ling, system, into New England. This was a system of lighter gymnastics which found much favor in the schools, and for perhaps 20 years it spread rapidly throughout the country.

DETROIT

It was during this period that the Detroit schools added physical training to the curriculum. In 1891 a system based primarily on the Swedish was introduced. It was formal, consisted of gymnastic stunts, drill, and calisthenics of the earlier period, and was combined with a little physiology and hygiene.

All of these different forms of physical training were originally conceived as health measures. Each of their founders believed, with some truth, that the best way to good health and physical perfection was through exercise. Away from the inspiration of their founders, however, the exercises as they planned them lost much of their usefulness as means of development. They degenerated into mere forms of exercise and were valued in American schools solely for their disciplinary effect.

It was not until medical science had proved that there are more important essentials to health than exercise that the school movement took its modern form.

The first medical inspection of public school children was held in Boston, where so many of our progressive educational movements have started, during an epidemic in 1894. Its purpose then was merely to discover and select out those who were carrying contagion, but as the work progressed both the medical and teaching professions saw the value in going deeper and inspecting school children for hidden defects and disease. It was then that the distinction between health education, as we know it and physical education, as it was exploited, was made.

OBJECTS SOUGHT

Health education has as its aim the development of habits of healthful activity, both physical and mental. In that it differs from physical education which is based solely upon physical development. Health education has two distinct purposes:

(1) The promotion of health, normal growth, and the development of the body as an efficient organism, and

(2) Psycho-motor education (the old physical training idea) which emphasis on body control and character.

Physical education, as it was conducted

in the schools, was single in purpose and mental only in so far as it was disciplinary.

It was seen that physical culture would not accomplish the ends which were expected to be achieved. Changes in social and economic conditions alone completely annihilated the good effects of physical training.

Since 1900 there has been a gradual development of health education as a means of satisfying social demands for healthy men and women. The play movement, which started about that time, the contributions of the medical sciences, the new interest in the school as the instrument of society, brought about by the new philosophy of Dewey, stimulated by the psychology of Thorndike, and the experimentation of Courtis, the work of the school nurse and the medical inspector all stimulated health education in the school and changed the place of emphasis. The study of physiology and hygiene was greatly expanded. Teachers were trained to give instruction in physical education and it was made a part of each day's program. By 1910, in Detroit, and somewhat earlier in many of the eastern cities, there was a definite organization for physical education and a beginning was made in correlating it with other subjects.

The principle of the whole thing was wrong, though, as we discovered eight years later. We entered the war and the youth of the nation were examined for military service. To our surprise and great concern, one-third of those in the first draft were unable to pass a physical examination. We had assumed that because our children had learned about their bodies and had been taught how to care for them they were consequently healthy.

We realized then that knowledge is useless unless it is applied; that merely knowing the rules, without developing ideals and habits of health is not effective in producing healthy men and women.

Since then, health education, in its true sense, has displaced physical training in the schools. Health has been given first place among the seven objectives of education, not only because it contributes to personal well-being, but because it is essential to social progress. It is emphasized in all the school work, not just in health classes. It has become a fundamental, along with the ability to read, write, and figure.

Because it is through physical exercise, games, sports, plays, etc., that habits of healthful living are formed, the gymnasium, swimming pool, showers, athletic field, and outdoor play court are prominent features of the modern elementary school. There, in the lower grades, exercises and games of a nature to develop the large muscular system and to establish the proper co-ordinations are given. For the older children there are stunts and exercises to develop athletic abilities and various skills. The fun they get in achieving proficiency in these sports gives them an attitude toward health habits that is of lasting benefit.

No boy can romp around the gym in the way these little fellows are doing without having enough enjoyment to want to continue to romp long after they have past the school age. These competitive athletics offer enough amusement to encourage continued participation in them. The thrill that comes of winning fairly and honorably, of being a good sport, is good not only for the soul but for the body as well, since it promotes the desire to enjoy the thrill again and again. Thus a healthful habit is formed.

HEALTH INSTRUCTION

More important than this physical training, however, is the general course in health instruction which each child in the first through the ninth grade pursues as part of his daily program. Without the knowledge and attitude toward health gained through the general course, exercise would be of little avail.

The general course is based on the following program:

(1) A physical examination of all school children, for the purpose of discovering infection, disabilities, and hidden, but remediable defects.

(2) Activities related, as far as possible, to the *individual needs of the child.* This is getting away from the unproductive and often harmful group activity which characterized our early system of physical training.

(3) Co-operation of home and school in establishing health habits. Little can be accomplished if in their homes children are not encouraged to put what they have learned into practice.

(4) School plant hygiene. This is an important feature of the health program.

(5) Gymnasium, playground, athletic field, and swimming activities, which I have already outlined.

(6) Corrective classes for the improvement of the curable physical defects, and

(7) Stimulation of activities which are extra-curricular.

The aim is to bring before the children, "through experiences, observations, and reading, the basic elements of health and to instill in them an inner urge to do those things necessary to a healthful life."

COURSE OF STUDY

Recently a course of study was adopted and published in Detroit for the use of teachers in conducting health instruction in the schools. Based on the axiom that "longevity and an abundance of health is not

the result of two or three simple exercises, rules, or formulae, but of everlasting surveillance and instant stoppage of the numberless leaks in the reservoirs of health and the maintenance of a high level of energy and vitality," the new health course develops each of the divisions of a normal healthy life from the standpoint of nine contributing factors; food, rest, air, exercise, clothing, cleanliness, posture, leisure time, and qualities of mind. Further it aims to create such a feeling of personal responsibility for the pupil's own health that he will follow all the laws of health. It aims through direct health teaching and correlation with other subjects, to give the children of today a high regard for physical fitness that will carry with them throughout life.

The course is graded, each of the grades from 4 to 6 devoting its time to learning thoroughly the laws of two of the objectives of health. For instance, in the fourth grade, growth control and control of illness are the subjects of health teaching. The children learn the laws of normal growth, the part food, rest, air, exercise, cleanliness, clothing, posture, state of mind, and use of leisure time play in attaining proper growth, and how to build strength. Then they study ways and means of decreasing illness. Since freedom from illness is purchased largely by right hibits of living, the thing to do is teach the children the true laws of health. They are taught that most sickness is preventable; that even a slight illness is costly in time, money, efficiency, and happiness; that every illness will leave the patient with lessened resistance to other illnesses. They prompt medical attention in case of sickness, and are taught many of the things necessary in nursing the sick.

In a like manner, the improvement of physical defects for the purpose of attaining to a maximum efficiency and happiness is stressed. Corrective classes are held and exercises, the nature of which is determined by physical examination, are given.

In this work the co-operation of the Board of Health is invaluable.

Our special interest is the Health Department work in the schools.

MEDICAL EXAMINATIONS

In an effort to safeguard and to promote the health of the children, the Detroit Board of Health offers to the schools, public, private, and parochial, nursing service, specialists for the diagnosis of communicable diseases, medical and dental service, nutrition classes, little mothers league classes, health talks, supervision of children in open air schools and open window rooms, and special medical attention for the handicapped, including the deaf and partially deaf, blind or partially blind, and the crippled. In addition may be mentioned the sanitation of school buildings and the supervision of swimming pools.

In all 75 nurses are doing school nursing. Each nurse has an average of from three to five schools which she visits each morning. A few schools have only a two or three day service, and a very few are visited only once a week. With the exception of a small number of schools in our better districts, each school has a morning clinic conducted by the nurse. To these clinics come children who are not feeling well—with cuts or bruises, with suspicious symptoms of communicable disease—in short, all children whom the teachers wish the nurse to see, and in addition, all children who have been absent for two or more days on account of illness. Children with suspicious symptoms of communicable disease are sent home to await the arrival of the diagnostician who visits the home at the telephoned request of the nurse. In addition to holding clinics the school nurse makes room inspections, home calls on children who are sick without the services of a private physician, holds nutrition classes, and does the follow-up work necessary for the correction of physical defects found by the medical inspectors. Major contagion, tuberculosis, etc., are cared for by special nurses assigned to these various types of work. In 1921-1922 the school nurses made 40,405 home calls.

Each year those children who are found by weighing and measuring to be 15 per cent or more underweight are given complete medical examinations. Other children especially referred by the teacher or nurse are given such examination as may be necessary. This work is in the hands of 12 half-time physicians, divided into four squads of three each. To each squad is attached a squad nurse who does the clerical work and is responsible for the conduct of the examination. Last year over 60,000 children were examined by the four squads. This year all children of the public schools have been tested for vision and hearing by the teachers. Those found to be defective are rechecked by physicians. In this way large numbers of defects have been discovered which otherwise would have gone unnoticed. Three half-time physicians are engaged solely in vaccinating and immunizing against diphtheria. Last year over 20,000 children were vaccinated and over 6,000 given toxin-antitoxin. Both physical examiners and immunizers travel from school to school on pre-arranged schedule.

The services of specialists for communicable disease diagnosis are invaluable. The diagnosis of communicable disease, both among children and adults, is in charge of eight regional diagnosticians. The diagnostician receives his calls from nurses, private physicians, and parents. He does not visit the schools, but makes his diagnosis in the home.

Seven schools maintain dental clinics. All of these are operated daily. Children in nearby schools are referred to these clinics for treatment when they cannot afford the services of a private dentist. Children from schools with no dental clinics in the immediate vicinity are referred to the Department of Health, where in 1921-22, 15,856 children were given dental attention. In the seven school clinics and hospital clinics during the same time, 19,835 children were treated, making a total of 35,691. Nine dentists operate exclusively in the schools, and there are six more in the central clinic. Four dental hygienists spend most of their time in the schools.

The nutrition classes are conducted by the school nurses under the direct supervision of a trained dietician and in co-operation with principals and teachers. The classes also have for their object the building up of positive health habits.

There are in addition to these health workers, specialists in various local departments who work with the special education department of the schools to make life easier for the physically handicapped by remedying their defects where possible. Before children are admitted to the special rooms or to schools for the handicapped, such as the school for the deaf, crippled, etc., they must be examined by these specialists.

SAFETY EDUCATION

Safety education plays an important part in health instruction. For several years the schools have been forced to consider safety teaching as one of their vital problems. The accident situation has become so acute that every public service organization has been recruited to help in alleviating the trouble. In Detroit, from the kindergarten through the elementary grades, systematic training in safe living is regularly given. The little tots in the kindergarten and first grades play games in which they learn traffic laws and regulations. They have miniature streets, marked out on their classroom floor, with semaphores, safety zones, tracks, etc., and they learn how to conduct themselves properly on them. In the higher grades, fire prevention, first aid, and accident prevention are emphasized, and while acting as assistant traffic officers, the bigger boys and girls learn respect for law and order and become better citizens for being safe ones.

To be effective, this health instruction of which I have been speaking must extend to every child in the school system. That is only one of the reasons why the Board of Education so urgently presses the citizens of Detroit to approve the extension of the platoon and intermediate school systems and is trying so hard to replace the old, worn out school buildings now operating by new and up-to-date ones, where opportunity is offered each child to build up his body in the gymnasium, to learn how to preserve health, to form good health habits. It is only in a school which is equipped for health service that children can receive the education they need. In buildings that contain a gymnasium sufficiently large to care for 80 pupils at once every hour of the day, a playground, dustless, well cared for, and large enough to afford every child in school at least one out-door play period daily, an auditorium, where what they have learned in all of their classes can be synthesized and socialized, we feel sure that a more healthful, more enthusiastic, and more efficient group of pupils will be the result.

The Detroit buildings, planned as they are to serve the scientifically constructed curriculum, and not built of a pattern to which the curriculum is fitted after their construction is complete, adequately serve the first of the educational objectives. To us, modern health education is a real and personal thing. Two hundred and eighty teachers devote their entire time to it. Some 125,000 students are brought into daily contact with health problems and their solution. A supervisory staff of some dozen men and women, trained in their field, work constantly to improve the methods and subject matter of instruction. We are striving not only to serve the children, individually, by putting health, happiness, and the means of fulsome life within their grasp, but the community, and the nation by producing the best kind of citizen we know how. Health means morality, efficiency, social success. Health education, in its modern form, means the achievement of these ends. Therein is its justification.

In the motion pictures and slides which follow the activities outlined will be fully illustrated.

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THE DIAGNOSIS AND TREATMENT OF TUBERCULOSIS GLANDS*

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The inception of tuberculosis occurs often in infancy and childhood. Observation of tuberculosis in childhood leads one to believe that treatment in the early forms of the disease often leads to satisfactory and permanent results.

Tuberculosis adenopathy can be divided into three main groups: 1. Hilus; 2. Cervical, and 3. Mesenteric, these being the important sites of lymphatic predilection of the tubercle bacilli in childhood.

Certain factors in making a diagnosis of tuberculosis apply to all cases. The history is of value in obtaining evidence of "exposure" to the disease. The cutaneous tuberculin reaction in a child up to two years is sufficient proof that the active form of tuberculosis is present. From this age upwards the importance of the tests diminishes and other signs and symptoms have to be sought and studied to establish the diagnosis of the active form of the disease.

Broncho or hilus adenopathy of tuberculous origin offers the most difficulty in diagnosis. The symptoms of hilus tuberculosis are less characteristic than those of pulmonary tuberculosis found in the adult. Cough is a less common symptom and hemoptysis is rare. Fever and a rapid pulse are associated with so many ailments in childhood that these signs are not often helpful factors in establishing a diagnosis. Loss of weight, or more particularly failure to gain in childhood are valuable signs of some existing underlying infection. The physical examination of the chest showing a positive D'Espine's sign is believed by many authorities to be evidence of an existing tuberculosis. But it must be remembered that if serial examinations are made following measles, whooping cough or repeated respiratory infections that this sign can often be illicited. The X-ray gives the most tangible evidence of the existence of hilus tuberculosis. The association of very large hilus glands with changes in the parenchyma of the lung are the most definite findings in this form of the disease. Making a diagnosis of tuberculosis on the presence of enlarged hilus glands alone is hazardous. Only on careful consideration of other existing factors, unaccountable fever, loss of weight or stationary weight and a positive tuberculin reaction can we assume the existence of tuberculosis.

Fortunately the diagnosis of tuberculosis adenopathy in other regions does not offer the same difficulties. Enlarged tuberculosis cervical glands can always be easily seen or felt. The small node-like enlargements frequently found in children should not be considered. Enlarged cervical glands in children under two years are usually due to some acute disease other than tuberculosis. Other foci, the teeth, tonsils, ears, infections of the scalp, eczema and less often, sinus infection, should be excluded as sources of lymphatic enlargement. In acute glandular fever glandular enlargements usually affect the various lymphatic groups, cervical, auxillary, inguinal and often the mesenteric group associated with fever and the constitutional symptoms of an acute infection. Lymphatic leukemia with adentis is diagnosed on the blood findings. In lymphosarcoma there is usually great enlargement of the hilus glands and rapid progression of the disease from the onset to fatal and early termination. Hodgkin's disease is a rare disease in children. The blood picture offers some aid in diagnosis. Syphilis is not a common cause of large glanular enlargement in children. In difficult cases the microscopic examination of a gland can be used in making a diagnosis. It does not seem necessary to resort to this measure unless Hodgkin's disease or lymphosarcoma is suspected as the resulting scar of a biopsy always marks one, especially, among the laymen, as being tuberculous.

The important diagnostic signs in tuberculosis cervical adenitis are that the swelling comes on gradually, and at the onset there are no constitutional symptoms. Usually the swelling is bilateral and often one side is affected more than the other. The skin over the glands is movable. The glands increase in size slowly. If they are allowed to progress they become tender, and as the process becomes more advanced the glands become soft and break down. The skin then becomes adherent to the underlying structures, sinuses form and the glands discharge, leaving marked disfigurement. The extent to which the glands are involved and the progress of the disease, if untreated, is measured by the resistance of the individual patient, as in the severe cases of tuberculosis adenitis there is noticed more marked constitutional symptoms. The cutaneous tuberculin reaction is positive in these cases and the degree of the reaction seems to bear a definite relation to the severity of the process. In some of the cases it is

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difficult to get a history of exposure. In bacteriologic studies the bovine type of the organism is found. The milk supply is the most common source of this type of infection.

The chief factors in arriving at a diagnosis of tuberculous cervical adenitis are large cervical swellings usually bilateral, slow onset and progression, absence of a focus of infection, no constitutional symptoms occurring in a child over two years. It is important to establish an early diagnosis, as treatment at this time gives the most satisfactory and permanent results.

Mesenteric tuberculosis adenitis usually occurs in younger children. It is often in infants and children up to two years of age. It is probably a milk born infection in a large majority of cases, although coughing up and swallowing infected sputum, a common habit of childhood, from a tuberculous lung focus can cause tuberculosis with the resulting glandular involvement. It is often difficult to establish a definite intestinal focus in children under two years, the cutaneous tuberculin reaction is a great aid in establishing a diagnosis. When clinical diagnosis is possible, the abdominal tumor of tuberculosis adenitis is often as large as half an orange and can be palpated in the region of the mesenteric glands. In this form of tuberculosis in children up to two years of age, there is usually a marked constitutional reaction consisting of a marked loss of weight and secondary anemia. All degrees of tuberculous mesenteric adenitis occur in children. In the less marked form the same difficulty of diagnosis occurs here as does in the hilus type of tuberculous adenitis.

TREATMENT

The treatment of all forms of tuberculosis adenitis begins with the usual hygienic, dietary and rest regime used in the successful treatment of all forms of tuberculosis. All other adjuncts in treatment are only successful when these primary requirements are met.

X-ray therapy in repeated doses will reduce the tumor masses when used in the early form of the disease. This form of treatment is most efficacious in the group with cervical involvement. Treatment should be started at the time of early enlargement of the glands when only scattered small tubercles are distributed throughout the glands. When marked cessation is present, X-ray therapy is of little avail, as this type of gland quickly goes on to suppuration. Adherence of the glands to the overlying skin follows, sinuses are formed and surgical intervention must be used to correct the condition when it progresses to this degree. X-ray therapy has no direct effect on the tubercle bacilli per se. But the destruction of the surrounding lymphoid tissue seems to establish an unfavorable pabulum for the further growth and dissemination of the organisms. Following up cases treated with X-ray therapy does not lead one to believe that the destruction of the gland with the X-ray leads to the dissemination of the tubercle bacilli to other organs of the body. With rigid general constitutional and X-ray treatment combined, successful results can be obtained in cases which an early diagnosis of tuberculosis is made.

The Quartz light should be used in the general treatment of tuberculosis. We know that from its use in the treatment of rickets that it causes an increase in the calcium and phosphorus content of the blood, and in the treatment of tetany with the Quartz light the lowered calcium content of the blood returns to normal. From this we deduct that the ultra violet rays have a general effect on the body chemistry and probably have a like effect on metabolism. The Quartz light does not act on the focus directly as does the X-ray. Therefore in treating with the Quartz light, its application should be made general, that is, over all parts of the body in order to get its maximum effect in the shortest period of time. The Quartz light deserves to be placed next to rest, diet and hygiene in the useful procedures that are known for the treatment of tuberculosis adenitis.

VON JAKSCH'S DISEASE, ANAEMIA INFANTUM PSEUDOLEUKEMIA

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This condition is here considered as a separate disease even though there is doubt that it is a definite clinical entity. It is, however, convenient to consider it apart from the other anemias. Von Jaksch's disease was considered with Banti's disease and Gaucher's disease as splenic anemias because of the association of anemia and marked enlargement of the spleen.

VonJaksch's disease is the most easily recognized of all the chronic splenomegalies. It usually begins between the sixth and twenty-fourth months, and runs a slow course. The cause is unknown. Many or all cases are rachitic and the name rachitic splenomegaly has been suggested as the proper one. It seems, however, that the

bony changes seen in VonJaksch's disease are the result, rather than the cause of the trouble. Several consider it is related to Banti's disease, but Sailer considers that the splenomegalies or splenic anemias of infancy should be considered separately, even though they are a rather indefinite group.

VonJaksch's disease is a condition of infancy associated with enlarged spleen, moderate or severe anemia, with leucocytosis and a high percentage of lymphocytes (as high as 60 per cent) but with all form of leucocytes increased. The leucocytosis and the type of leucocytosis are differential features of the condition. There is a reduction of erythrocytes, occasionally to one million, but usually not below two million. The hemoglobin shows greater reduction than the erythrocytes. Nucleated red cells and myelocytes are common.

About twenty-five per cent of the children die of complications such as pneumonia or diarrheal diseases. The remainder recover after prolonged treatment, usually several months.

VonJaksch's disease is usually recognized with ease from the age of the patient, the blood picture and the early splenic enlargement. Pseudoleukemias, pernicious anemia, Hodgkin's disease, and the leukemias are found in older individuals. Banti's disease begins at a later age and is not associated with marked splenic enlargement until a much later age. Secondary anemias are not associated with a marked splenic enlargement such as seen in VonJaksch's disease. Rickets can be differentiated by X-ray and blood-calcium and phosphorus if not by history and physical examination. The hemolytic icteruses can be differentiated by the longer course with associated jaundice and the history of other cases in the family (in the same generation) if it be of the familiar type.

I wish to show one boy that has passed through a typical attack of VonJaksch's disease and whose record we have for a period of five years.

H. E. M. was born May 27, 1917. He was admitted to the hospital April 8, 1918, but no history was obtainable. (I have been unable to learn anything of the feeding or other history previous to admission). At this time, age ten and one-half months, he weighed eleven pounds three ounces. He was unable to sit unsupported and could hold his head up only a few seconds. He was undernourished and had poor musculature. His skin was pale and lips pale and slightly cyanotic. No teeth had erupted. Slight enlargement of the cervical and axillary glands was noted. The frontal bosses were prominent and a groove present between the parietal areas. The frontanelle was large. The rib margins flared markedly and the ribs were prominent. Dullness was found in the splenic area. The respiratory rate was 45 to 48. The heart rate was 132. The pulmonary second sound was accentuated. There was a systolic murmur heard over the precordium described as musical. It was heard loudest at the aortic region and was not well transmitted to the axilla or neck. The abdomen was very prominent and enlarged in all directions. The umbilicus protruded. The liver was easily felt one inch below the costal margin in the mid clavicular line. The edge was sharp and the surface smooth. The abdomen was slightly tense. The spleen was much enlarged, reaching to within one centimeter of the illiac crest on the left and to the umbilicus. The notch was felt just below and to the left of the umbilicus. The testes were present and there was slight scrotal oedema. There was also slight oedema of the ankles.

The blood Wasserman and ophthalmic tuberculin tests were negative. The coagulation time was prolonged beyond twice the normal (Duke's method). The erythrocyte count was 2,800,000. The hemoglobin was below 25 per cent. The leucocyte count was 20,600. The differential count showed polymorphonuclear neutrophile 25 per cent, eosinophile 3.5 per cent, lymphocytes 55 per cent, myelocytes 5 per cent, transitional 3 per cent, normaoblasts and megeloblasts were seen. Poikilocytosis and polychromatophilia were present.

The treatment was mainly symptomatic. Enemas were necessary on admission. His diet was confined at admission to cereals and milk but mashed vegetables and fruit were soon added. For three months green citrate of iron was given hypodermically on alternate days.

By August 22, 1918 (four months after admission), his blood count was 4,200,000 red cells, 10,200 leucocytes with 30 per cent polymorphonuclears and 70 per cent lymphocytes. In December his spleen was still two fingerbreadths below the costal margin and the liver was one fingerbredth below. At this time his blood still showed a mild anemia. In February, 1919, ten months after admission to the hospital he was discharged to an orphanage as well. His blood count then was 4,925,000 red cells, 13,700 white cells with 59 per cent polymorphonuclears, 39 per cent lymphocytes and 2 per cent transitional. He has remained well until the present time.

At present he is a well nourished boy of six years and seven months of age. He has a few enlarged cervical glands. He has had his tonsils removed. His liver is palpable two fingerbreadths below the costal margin. Otherwise his physical examination shows no abnormalities. His blood count shows 4,320,000 red cells, 85 per cent hemoglobin, 9,600 white cells with 69 per cent polymorphonuclears, and 31 per cent lymphocytes. His neurological examination shows a moderate retardation, testing up to the fifth year. X-ray of the bones show no evidence of previous or active rickets.

The treatment of this disease is mainly symptomatic. The green citrate of iron is frequently used with varying results. The value of splenectomy has been discussed by W. J. Mayo and others. With our present understanding of the condition probably the general hygiene of the patient is the type of therapy most deserving of our attention.

From the Dept. for Clinical Investigation, Children's Hospital of Michigan. Read before the Detroit Pediatric Society, Jan. 1, 1924.

BLOOD TRANSFUSION

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Blood transfusion is a definite therapeutic agency indicated in a large number of diseases and after a stormy career has now become a simple procedure and not necessitating surgical skill. The addition of a portion of blood from one individual (healthy) to circulation of another who needs it under such conditions that the recipient may receive the benefit without disturbances therefrom, comprises transfusion.

Selection of a donor:

(1) The individual must be well and free from any contagious disease more particularly syphilis and malaria and must be well able to part with a quantity of blood.

(2) That his blood must be compatible with the blood of the recipient, i. e., no disturbance of patient's blood or donor's red cells will result inside the body.

The corpuscles of one species cannot be mixed with serum of another without profound disturbances although the serum of certain animals can be injected into man. Moss and Janski found that all human beings are divided into four groups in regard to the agglutination reaction of the red corpuscles and sera. In the test tubes as well as in the body the blood of each group is entirely compatible within the group, but incompatible outside the group.

Approx. Frequency	Red Cors. of Group	1	2	3	4
Group (1)—10%	Serum of group (1)....	0	0	0	0
Group (2)—40%	Serum of group (2)....	*	0	*	0
Group (3)—10%	Serum of group (3)....	*	*	0	0
Group (4)—45%	Serum of group (4)....	*	*	*	0

*—Agglutination. 0—No Agglutination.

Disease does not influence the blood group.

In newborns group not definitely established, and probably not up to six months, Iso-hemolysis present in about 20-25 per cent and usually occur only in presence of iso-agglutinatins. Hence ruling out one rules out the other.

METHOD OF TESTING

Obvious method is to test cells of donor with the serum of recipient and cells of recipient 9 serum of the donor but this does not tell us to what group they belong, which is a convenience.

Emergency method, four drops of blood in one c.c. of a 1 per cent solution sodium citrate, a drop mixed with a drop of serum and put under microscope 30 min. should be allowed for reaction.

Stock sera of No. 2 and No. 3 kept to test unknown blood.

Brem modification of Moss method.

Ten to twenty drops blood collected in small test tube—allow to clot serum obtained after centrefuging, protective when used with own corpuscule; agglutinating when used with cells of another; two drops of blood collected in a one cc. of 1.5 per cent citrate in .9 sodium chloride equals about 5 per cent suspension.

Hanging drops made in slides.

One slide two drops of standard sera (agglutinating) with one loop cell suspension to be tested and one loop of proctective serum (same blood as cells) one slide two loops of unknown sera (blood to be tested) with one loop of cell, suspension of known blood and one loop of its protective sera.

Readings under microscope:

Sera of recipient must never agglutinate cells of donor, but sera of donor may agglutinate cells of recipient.

VICENT'S METHOD

Determining Moss grouping:

Sera No. 2 and No. 3 kept as stock, one drop of No. 2 sera in one end and drop of No. 3 at other end. A drop of blood from person to be grouped is mixed with each of sera. Change may take place in 1-3 min.

Group Noted:

(1) If agglutination of corpuscles takes place in No. 2 and not in No. 3 the blood being grouped belongs to No. 3.

(2) If agglutination of corpuscles takes place in No. 3 sera and not in No. 2, the blood must be No. 2.

(3) If agglutination is noted in both No. 2 and No. 3 blood tested must be a group No. 1.

(4) If agglutination is not noted in No. 2 or No. 3, blood to be tested must be a io.

REACTION DUE TO INCOMPATIBILITY

When serum of recipient agglutinates cells of donor; but whereas ony 20-25 per cent iso-hemolysis occurs where iso-agglutination takes place. Chances are good for no reaction of this type being far more serious than agglutination, nevertheless reaction of agglutination is to be avoided if possible. Haemolysis may be only slight, varying from a mild hemolytic jaundice and haemoglobin in urine. Some cases when first reaction was slight second became serious. Symptoms, restlessness, rising respiration and pulse rate, pain in back, vomiting and chill. Death on table or within 24 hours; majority however recover.

REACTION NOT DUE TO INCOMPATIBILITY

In some diseases as scepsis, blood seems to be definitely altered with production of

haemolysis and agglutination not normally present. Reactions common are probably due to instability of blood when removed, or protein intoxication; comprising rise of temperature, chill and skin phenomenon, lasting 1 hour to 24 hours or coming on later and lasting two or three days; more common when accompanied by anticoagulant; 35 per cent of citrate transfusion. Unger found cells more fragile and complement affected directly and indirectly by introducing a anticomplementary substance; also reduces functions of opsonins and phagocytic actions of white blood cells. Therefore transfusion of unaltered blood in anaemias and infections and transfusion of altered blood in haemorrhage to replenish improvorished circulation and stop haemorrhage and not for replacing pathologic blood with normal blood.

Robertson found some groups established in infancy and recommends compatibility being tested, also prefers unaltered blood by syringe canula method. Maximum amount in children up to 18 months, 15 cc. per pound weight.

GENERAL PRINCIPLES IN USE OF TRANSFUSION

To restore in part all the elements, to restore in part any element, and occasionally for stimulating effect or bone marrow. To restore in part all the elements the factors are the blood volume and the oxygen carrying constituents of the blood. Although volume can be made up with other substance no substitute for restoring red cells. The duration of effect depends on life of red cells, found to be as long as 40 days Transfusion never performed to restore white blood cells, but may be used to restore platelets or stop a haemorrhage. Platelet duration about four days, repeated transfusions are necessary, and large amounts are necessary. If we transfuse only one-quarter of blood volume we raise the plately by 50,000 and large numbers are being destroyed, also transfusions appear to have stimulating effect on bone marrow activity.

Now being more specific the uses of transfusions:

(1) Secondary anaemias restoring cellular elements.

(2) Haemorrhage diseases of newborn. Mortality reduced to 2.3 per cent, Robertson H. S. C., Toronto.

(3) Did not find any value in Leukaemias, Purpura and Haemophilia and Von Jaksch's anaemia.

(4) Benefit in Masasmus with secondary anaemia, acute-intoxication and respiratory infections with secondary anaemia. Robertson used exsanguination method withdrawing about 120 cc. and then beginning transfusion, giving amount up to 300-400 cc. His results in a few cases of severe burns which were showing marked Toxaemia (convulsions occurring) five out of eight recovered.

Any method should embody following requisites·

(1) Blood must be out of the body a minimum length of time.

(2) Passing through a minimum amount of foreign material.

(3) Anti coagulants be avoided if possible.

(4) Foreign materials should not be introduced not even na. cl.

(5) Must be applicable in any case in any disease.

(6) Must be possible to transfuse any amount with minimum reaction.

1. Direct or syringe canula method of Ziemson as improved by Linderman.
2. Citrate method of Lewisohn.
3. Intraperitoneal method of Siperstein.

First Direct. There is less reaction following transfusion of unaltered state of blood, 20 cc. luer syringes sterilized and liquid petrolatum sterilized run through. Expose infants veins at elbows or saphenous, needles unbevelled introduced into veins lower end tied off. Assistants fill one with blood and passes it to surgeon to introduce. When not giving blood syringe is filled with saline to keep needle free. One is emptying while the other is filling. Infants safe limit—80-150 cc. 15 cc. per pound of body weight.

Symptoms of hypertransfusion:

Cough (stop at this symptom), increased respiration, quick thready pulse, older patient's back aches and pains in legs.

Second Indirect Method, Citrate Method. Mayos lay stress on preparation of all tubing being used, first boiled then treated for 48 hours in a 15 per cent sod. hydroxide solution, then water run through for several days, also distilled water. Use the following proportions; sod. citrate 18 grs., water 60 cc., blood 460 cc.—1.5 per cent mixture.

Citrate is first run through tubing before blood is collected; with this preparation found fewer reactions and chills.

Third Intraperitoneal transfusion. Work of Siperstein and Sanzby, experimentally arrived at following conclusion.

(1) Intraperitoneal transfusion of citrated blood in rabbit is safe, simple and efficient.

(2) Absorption takes place rapidly. A rabbit can absorb 1/5 per cent of its own blood volume in four hours.

(3) Sharp temporary rise in blood values during absorption period followed by more permanent increase in blood picture.

(4) Autopsy findings considered with the blood counts would tend to show rise due to actual absorption and not a concentration.

(5) Pigeon's blood given subcutaneously does not enter circulation but intraperitoneally did rapidly.

(6) Therefore a true transfusion and not as absorption of nutrient material.

Conclusions in clinical cases:

(1) Intraperitoneal transfusion is a therapeutic procedure of possible merit.

(2) It can be utilized in cases in which transfusion is indicated where other routes are unavailable or impractical.

REVIEW OF LITERATURE ON BLOOD TRANSFUSION, 1923

Astrowe, P. S.: Hemolysis Following Transfusion, J. A. M. A. 79: 1311, 1922. Reports two cases, one in a child of eighteen months, the other in an adult, in which severe hemolytic reactions followed the second transfusion from a donor whose blood had proved compatible on direct test prior to the first transfusion. After the second transfusion the bloods proved incompatible on repeating the tests. The author concludes that iso-agglutinins and iso-hemolysins are weak. Mutual blood tests should always be supplemented by blood grouping, and tests should be repeated before each transfusion in children.

Cruchet, R., and Ragot, A. (Transfusion of Blood from Animal to Man), Paris med. 13:82, 1923. Reports preliminary experiments on animals showing that the blood of an animal of one species can be transfused in animals of another species without untoward results. Following this, transfusion of animal blood was used in 18 human cases (22 transfusion; sheep blood was used for eight cases, horse blood for 10 cases. Considerable reaction followed this procedure in some cases, which was, however, only temporary. There was definite improvement in the patient's condition in all but three cases.

Huck, J. G. and Peyton, S. M.: Study of Iso-Agglutinins before and after Ether Anesthesia, J. A. M. A. 80:670, 1923. Reports cross agglutination tests on 25 patients undergoing operation with ether anesthesia, before operation and at varying periods within the first twenty-four hours after operation. No changes in the blood groups was observed contrary to the findings of Levene and Segall. The authors conclude that blood transfusion within the twenty-four hours after ether anesthesia is safe if a suitable donor has been chosen previously.

Meyer, K. and Ziskoven, H.: (The Constancy of Agglutination Types in Man). Med. Klin. 19.87, 1922. In tests on 23 operated under anesthesia, treated with roentgen rays, radium or certain drugs, no alteration in the blood agglutination type could be detected. A general discussion of methods of blood grouping and its importance in transfusion.

BRIEF SUMMARY OF A FEW CASES IN THE HOSPITAL

Case 1. Haemorrhage Disease of newborn. Intraperitoneal method. Baby E. 2 weeks old. Seen March 21, 1923. Premature, 8th month, parents noticed it bruised very easily since birth.

History—Began to be fussy the night before and this a. m. at 7, began to bleed at nose and throat. Breathing became difficult. Would stop breathing, eyes would roll up and baby would become limp, necessitating artificial respiration by the nurse.

Examination—Collapsed baby marked pallor icteric tint to the skin. Baby would take a few breaths or gasps then stop. Aroused only with difficulty and would breath regular for a short time.

Fifty c. c. Citrated blood from father given intraperitoneal. Remained much the same but picked up at first probably due to shock. About four or five hours later improvement began. Rise of temperature, breathing easier and took nourishment.

At 9 p. m. gave 30 c. c. intramuscular.

Had a good night, took nourishment from this on took feeding and went on to uneventful recovery.

Case 2. H. L., 5½ years old. Admitted 12-7-22. Discharged 1-9-23.

Diagnosis — Hamophilia peri-renal haemorrhage. Haemorrhage from operation wound (phlebotomy) complication.

cc. (1) Injury to side. (2) Blood in urine.

Two days ago boy slipped from lounge and fell against radiator valve striking his left side, following this he complained of pain in flank. Skin showed only bruising and discoloration. Blood was noticed in urine one day later and has increased in amount at each urination. No pain or frequency. Has become pale and weak and restless. Vomited night following injury, no blood. No blood in stool, no chill, no fever.

Past Illness.—Normal birth, full time child. Mother had moderately post partum haemorrhage. Baby bled from cord—not circumcised. Srotum had to be tapped. Cause?

Reasons—At birth he was yellow, persisted two weeks. Never rosy. Breast fed seven months. Feeding o. k. No infectious diseases. At thirteen months fell out of crib and bit his tongue, bled one day, healed over rough and clipped, and bled for four days. Transfused with father's blood, intramuscular and intravenous.

At two years scratched lip with coarse food and bled severely for one week and transfused.

Transfusions have been the only agents that have given results.

Patient has shown improvement in past year. Has had injuries with less severe results. Tooth knocked out with comparatively little bleeding. Has been treated by Doctors Abt. Hess, Sedgewick Cole Pierce of Chicago, Minnesota.

Family—Mother had Post Partum Haemorrhage. Maternal grandmother bleeder, otherwise negative.

I have spent considerable time on the history of this case because it is interesting and instructive.

HISTORY OF STAY IN HOSPITAL; EXAMINATION

Pallor—Black and blue spot on left kidney region and forehead, also many faded spots on legs and arms, no jaundice. Abdomen tender and pains, complains on motion of legs, pain in left groin.

Dec. 9.—Urine bloody. Haemoglobin 55 per cent. Red B. Cord count 3,450,000. White count 7,600. 69 per cent Polys.

Coagulation time 11 minutes, on the 30th, 18 minutes.

Transfused 85 c.c. blood. External jugular vein. 80 c.c. intra-muscular.—Father Type IV.

At noon, vomited blood clots and later about 125 c.c. fresh blood and at 5:30 direct transfusion 180c.c. elbow vein and haemorrhages ceased.

Dec. 13—No recurrence noted.

Dec. 17—Bleeding from arm began and stitches put in and later that day as he was still bleeding, given 55 c.c., unaltered blood intramuscular.

Dec. 19—Direct transfusion unaltered blood 400 c.c. Improvement marked and next day no bleeding. Temperature rose to 104, elevated about 36 hours. Wound became injected but no recurrence of haemorrhage up to day of discharge, Jan. 9, 1923.

SUMMARY TRUE CASE OF HAEMOPLILIS

Had internal haemorrhage following injury.
Transfused three times.
Urine blood cleared up in five days.
Ferile course up to time of large transfusion, Dec. 19, 1922.

Case 3. Baby M. M. Admitted Aug. 29, 1923. Still in hospital. Five months old. Infective diarrhea and vomiting. Weight seven pounds on admission. Six weeks duration.

Emanciated dehydrated—Pallor collapsed.
Sept. 5—General oedema.
Sept. 12
Oct. 7—Convulsions. Meningitis-toxic.
Oct. 14—60 c.c. citrated blood
Oct. 14—15 c.c. citrated blood.
Oct. 28.—50 c.c. citrated blood.
Three more transfusions in November.
(Besides this, had almost daily intraperitoneal saline.)
Present weight, nine pounds. Result, good.

Case 4.—Baby B. T. Age 1 year, 4 months. Admitted October 26, 1923. Anaemia since birth. Has never sat up or made any attempt to stand, always very weak.

History negative, excepting mother anaemic and her mother anaemic—sent into hospital for this condition by Department of Health. Blood counts:

	Haemoglobin	Red Cells	White Cells	Polymorphs
Oct. 31.....	30	2,810,000	8,800	54%
Nov. 15.....	40	3,400,000	13,600	68%
Nov. 22.....	64	4,150,000	11,200	64%
Dec. 2.....	72	4,200,000	.....	.....

Transfused Nov. 14—40 cc. Citrated Intravenously.
Transfused Nov. 17—40 cc. Citrated Intravenously.
Transfused Nov. 20—40 cc. Citrated Intravenously.
Transfused Nov. 24—40 cc. Citrated Intravenously.

Complication in hospital. Broncho-pneumonia Oct. 30; Purulent otitis media Nov. 12; Pus cells in one urinary sample.

Diagnosis: Rickets with secondary anaemia.

Case 5.—Baby E. G., 1 year 3 months. Admitted Sept. 22, 1923.

Suppinating cervical adenitis. (T. B. C.)
Duration, 2 months.

Examination shows poorly nourished, anaemic, dehydrated. Baby weighs 11 lbs., 13 oz. Have no record of red cell count or haemoglobin on admission.

White count, 14,000; Polys. 60 per cent.
Oct. 24—80 cc. citrated blood intravenous.
Oct. 26—90 cc. citrated blood intravenous.
Nov. 2—85 cc. citrated blood intravenous.
Nov. 7—100 cc. citrated blood intravenous.

X-ray shows root infection which not considered to be TBC.

Since transfusion, has not gained in weight, but appears better; takes feedings well.

Last blood picture showed: Hb., 95 per cent; red count, 4,450,000; white count, 12,000; differential, P. M., 73 per cent; small L., 22; large L., 5.

Case A. C., age 6 years. Admitted June 8, 1923. Died Sept. 10, 1923, Purpura Haemorrhagica.

Healthy until 3 years old. Then had blisters which would disappear within a few hours. Purpuric spots. Subcutaneous haemorrhage. Black and blue spots, no mark left. Periods remission, 2 months, between when he is much better. Appetite, sleep and color much better. Past month worse. Eats and sleeps little, color more jaundiced, short of breath, apathetic. Bleeds easily. Occasional vomits for last month. Treated by doctor for three years with iron, etc. Physically well developed, under-nourished boy of 6 years. Pale color suggests extreme anaemia, such as pernicious anaemia. Cryptic tonsils. Increased breath. Sounds over lower part of right chest posteriorly compared with left posteriorly.

Systolic murmur, filling time of entire first sound, heard all over precordia. Heard loudest over mitral valve.

Pirquet negative. Wassermann negative.

6-11-23—HBC. 31%; WBC. 6,400; RBC. 1,240,000.
6-15-23—HBC. 25%; WBC. 4,080; RBC. 1,180,000.
Transfusion intraperitoneal; 110 cc. citrated blood, 6-26-23.
6-30-23—HBC. 25%; WBC. 4,200; RBC. 1,200,000.
7- 4-23—HBC. 27%; WBC. 3,900; RBC. 1,340,000.
7-11-23—HBC. 75%; WBC. 8,000; RBC. 3,700,000.
7-14-23—HBC. 28%; WBC. 4,000; RBC. 1,300,000.
8- 1-23—HBC. 24%; WBC. 3,800; RBC. 1,210,000.
Transfusion. Direct blood transfusion 60 cc.
8-17-23—HBC. 25%; WBC. 2,400; RBC. 1,200,000.
8-23-23—Transfusion on 290 cc. Citrated blood intravenously.
8-27-23—HBC. 35%; WBC. 2,960; RBC. 1,760,000.
8-30-23—HBC. 26%; WBC. 2,200; RBC. 1,280,000.
9- 4-23—HBC. 15%; WBC. 2,100; RBC. 950,000.
9- 6-23—Transfusion Direct 39 cc.
9- 9-23—HBC. 13%; WBC. 2,200; RBC. 760,000.
Blood picture and general condition showed a downward grade until death, September 10, 1923.

From the Dept. for Clinical Investigation, Children's Hospital of Michigan. Read before the Detroit Pediatric Society, January, 1924.

THE DIET IN ANAEMIA OF INFANCY AND CHILDHOOD

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The experimental work on which this paper is based was done by Whipple, Robscheit and Hooper of the University of California and published in the American Journal or Physiology, Vol. 53. It will well repay a careful study. The work was done entirely on dogs. The dogs were made anaemic by bleeding one-fourth volume of blood on two consecutive days. Then various diets were used and the efficacy of each diet was determined by the length of time it took to bring about complete blood regeneration. Whether or not the findings can be applied to children's diets is somewhat of a question, although Gibson and Howard in Archives of Internal Medicine, Vol. 32, July 1, 1923, have confirmed the findings in part for humans.

No one has attempted to confirm them for infants and children, although Lucas and Hoobler (Transactions of Am. Ped. Soc. 1923) refer to Whipple's work and agree that dietary regime pays a most important part in blood regeneration.

Let me detail roughly some of Whipple's findings and see if we can find analogy in our common experience among children.

In general three types of diet were used. First, sugar diet; second, mixed diet; third, iron rich diets. All these diets were made up of sufficient calories to supply energy need.

Let us consider' then the results of the sugar diet.

From researches of Whipple it seems fairly well established that a sugar diet has no power to regenerate blood cells or hemaglobin, in fact such a diet does not possess sufficient power to stimulate sufficient regeneration so as to replace the dying red cells which in itself requires considerable specialized protein building material both for the red cell stroma and for the complex hemaglobin molecule. On a sugar diet the proper materials are not brought to the cells for tissue building and blood regeneration often is less than is necessary to supply this wear and tear which constitutes about 3 to 5 per cent total cells every day if the thirty day life of the red cells in humans is accepted. (Ashley Jr. Exp. Med. XXIX, 263). Thus an anaema may occur from no other cause than a failure to keep pace with the normal destruction of cells. Indeed a sugar diet is of less value than no diet at all, since it has been shown that during a fasting period more red blood cells and hemoglobin can be produced than on a sugar diet. In fasting, however, only such amounts of material are used up as will enable the individual to replace daily wastage of red cells. Thus in limited diets the body tends to conserve all the protein amino-acids necessary for the replacement of hemaglobin molecule.

Sugar diets are therefore the least powerful in stimulating blood regeneration of any of the known diets.

This is quite in keeping with the observed facts in the diets of infants and children. Recently an infant of six months was admitted to the Children's Hospital of Michigan, who had been fed practically from birth on a carbohydrate diet, and this infant showed a marked degree of secondary anaemia. We have further evidenced that a high carbohydrate diet is poor in blood regeneration powers. Many children are received into our wards (Children's Hospital of Michigan), who have been fed on patent foods which are notorioiusly high in carbohydrate. Many of these children show a marked grade of anaemia with no other apparent cause than the dietary factors. These children being free from infections or toxemias, but easily become subjects of infections, when exposed to cross infections. We believe therefore, that high carbohydrate diets contribute to the anaemias of infancy and childhood.

Group two—The mixed diet:

This was represented in Whipples Experiments, by bread, rice, potato and milk. On such a diet the blood regeneration took place slowly, providing the diet was sufficiently adequate to cause an increase in weight.

How reminiscent this diet is of the articles which make up the bulk of many a child's dietary regime. This represents a group of children who, while gaining in weight, yet seem to lack the energy usually exhibited by a healthy child. The hemaglobin of this group is fairly good (above 80 per cent), but the child is apathetic, has a poor appetite and does not enter into its daily regime with zest. On such a diet the blood regenerates sufficiently to replace the wastage of red cells, but is not able to completely supply the demand of the growing child.

The third diet used by Whipple is the "Iron rich diet," and consists of animal tissues containing iron. These are represented by calves liver, lean beef, beef heart and whole blood. These animal tissues are combined with a mixed diet of fat and carbohydrate and are capable of stimulating blood regeneration in at least one-half to one-third the time it takes on a mixed diet.

Empirically this has been used for many years, particularly by the German pediatrists in combating the anaemas. In Czerny's Clinic it was routine to feed calf's liver to anaemic children. It was prepared as follows:

The liver was thoroughly boiled, capusule stripped, the liver tissue passed through a seive and then mixed with other food and fed daily. The water in which the liver was cooked is taken and used for cooking cereal. In America, beef juice, scraped lean meat patties, or scraped beef sandwiches are the favorite ways of serving the lean beef.

The heart of beef, next to calf's liver, seems to have a special power to regenerate blood cells and hemaglobin. This should be carefully boiled, shredded and fed in finely divided portions. (The common commercial meat extracts have no value.) On such an iron rich, vitamin adequate diet regeneration will take place from one-third to one-half quicker than on the average diet.

In the light of these researches and in view of their clinical confirmation, much more attention should be paid to the dietary treatment of the anaemias than in the past. We should not depend wholly on iron or arsenic or both combined, but together with these, study to supply an adequate diet rich in iron and vitamin. The blood transfusion is but another way of introducing such blood regenerative material into the system. The feeding of whole pigs blood in the form of "Blut Wurst" is quite common on the Continent. The feeding of these animal substances should be accompanied with vegetable and cereal diets also rich in iron,

and care should be exercised in seeing that there should be no vitamin deficiency. There is appended a list of the iron and vitamin content of a few commonly used food stuffs to assist one in choosing such a diet.

GRAINS OF IRON IN ONE POUND OF:

Orange	.014	Rice, brown	.141
Milk	.018	Raisins	.147
Beets	.042	Beef Steak	.155
Carrots	.042	Chard	.160
Lettuce	.050	Currants, dried	.174
Rice, polished	.062	Bread, graham	.174
Bread, white	.062	Bread, Boston brown	.210
Cheese, cottage	.067	Figs	.210
Asparagus	.070	Prunes	.210
Cabbage	.077	Eggs	.210
Macaroni	.085	Spinach	.252
Potato	.091	Oatmeal	.265
Bread, whole wheat	.112	Beef, lean	.272
Bread, rye	.112	Wheat, entire	.350
Peas, green	.118	Beans, entire	.489
Barley, pearled,	.128	Bran	.546
Wheat	.546	Egg Yolk	.602

TABLE SHOWING SOURCE OF VITAMINS IN FOODS

	Vitamin				Vitamin		
	A	B	C		A	B	C
Vegetables							
Beet root	1	1	2	Wheat embryo	2	3	0
Cabbage, fresh	3	3	4	Wheat kernel	1	3	0
Carrots	3	3	2	**Other Seeds**			
Cauliflower	2	3	2	Beans, kidney	3		
Celery	..	3	..	Beans, navy	3		0
Chard	3	2	..	Fruits			
Lettuce	2	2	4	Apples		2	2
Onions	..	3	3	Bananas	..	1	2
Parsnips	2	3	.0	Grapefruit		3	3
Peas, fresh	1	2	3	Grape juice		1	1
Potatoes	0	3	2	Grapes	0	1	1
Potatoes (sweet)	3	2	..	Lemons		3	4
Rutabaga	0	3	0	Limes		2	2
Spinach	3	3	3	Oranges		3	4
Cereals				Pears		2	2
Barley	1	3	..	Raisins		1	1
Bread (white)		1..		Tomatoes	2	3	4
Bread (whole meal)	1	3	..	Dairy Products and Fats			
Maize (in yellow)	1	3	..	Butter	4	0	0
Oats	1	3	..	Cocoanut oil	0	0	0
Rice (polished)	0	0	0	Cod liver oil	4	0	0
Rice (whole grain)	1	3	0	Cheese	2	1	..
Rye	1	3	0	Cream	3	1	..
Wheat bran	0	1	0	Eggs	4	2	0
				Milk (whole)	3	3	2

4—Indicates very abundant.
3—Abundant.
2—Relatively large.
1—Present in small amount.
0—Absent.

This table is adapted from "The Vitamin Manuel" by Walter H. Eddy, associate professor physiological chemistry, Teachers' College, Columbia University, New York City.

From the Dept. for Clinical Investigation, Children's Hospital of Michigan. Read before the Detroit Pediatric Society, Jan., 1924.

BLOOD COAGULATION

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There have been many theories explaining the coagulation of blood. Most of the workers on this question have used their own nomenclature and as a consequence the literature is deluged with a host of names for the same substance. I will try to use one term for each substance throughout as far as it is possible to do so and thus avoid confusion.

The theory most commonly accepted is that given by Howell (1). Briefly stated, it is as follows: Prothrombin, which is present in the blood, is acted upon by calcium to form thrombin. This reaction does not occur in the vessels, because of the presence of antithrombin.

In shed blood, the tissue cells of the blood, i. e., the platelets, furnish a thromboplastic substance which neutralizes the antithrombin and permits the calcium to react with the prothrombin to form thrombin. Thrombin reacts with fibrinogen in the blood to form fibrin (clot).

The thromboplastic substance, often called thrombokinase, is also found in various body tissues.

Mills (2) has a very interesting theory on the coagulation of blood which is based on that of Wooldridge.

According to this theory there are two fibrinogens (protein phospholipin compounds): (1) Tissue fibrinogen (thrombokinase) with an iodizable H or Na and therefore negatively charged in neutral solution; and (2) blood fibrinogen, also negatively charged in neutral solutions having an H or Na ion.

With the two together fibrin is formed by replacement of two H or Na ions, one from tissue fibrinogen and one from blood fibrinogen, by a Ca ion, giving fibrin.

This is analagous to the precipitation of other negatively charged colloids by bivalent metals.

Mills found that tissues in which hemorrhage is likely to be most dangerous possesses the richest stores of tissue fibrinogen —an effort of nature to control accidental hemorrhage. In the liver, however, it is difficult to control hemorrhage and yet it is rich in tissue fibrinogen. This is apparently due to the phospholipin fraction, for if this is removed by the use of benzene and that from the lung is substituted coagulation results.

The literature abounds in very recent contributions by such men as Vines (3) (4), Loeb et al (5) (6), Nisson (7), Mills (8), etc., but none have as yet actually solved the problem.

SLOW COAGULATION

The average normal coagulation time is about nine minutes, and the surgeon usually shows concern when it goes above ten minutes. It is because of slowed coagulation time in various conditions that we are particularly interested from a clinical viewpoint in blood coagulation. It is of interest to note that Falls (9) has found that fetal blood at the time of birth gives practically

the same coagulation time as that of the mother. Rodda (10) has gone further and shown that there is a prolongation of coagulation time in the new born and a gradual return to the average normal by the tenth day following. This point may be of value in a study of hemorrhage of the new born.

There have been many methods in vogue for taking the coagulation time, most of which can be found in the textbooks. The chief source of error in most of these methods has been due, I believe, to the temperature factor, because a difference in temperature causes a definite and marked change in the coagulation time. Very recently a new method was suggested, and because it is quite simple and apparently reliable, I will state it in brief (11). A capillary tube about one and one-quarter inches long with a 0.6 to 0.8 mm. inside diameter is used. The second drop of freely flowing blood from a stab wound is used and a quarter inch of the tube is left unfilled. The tube is held in a crease of the palm, with the hand closed. The hand is opened slightly and the tube inverted about every half-minute to note the end point.

When we consider the causes of slow coagulation, we enter a rather speculative field.

In general we can say that there is a lack of some substance in the blood essential to coagulation. There must of necessity be a disturbed relation somewhere between prothrombin, antithrombin, calcium and thrombokinase.

Howell believes that in hemophilia it is due to a relative preponderence of antithrombin. The antithrombin may be normal in amount or absolutely decreased, but on account of the absolute diminution of the prothrombin there is a relative increase in the factors that delay the coagulation of blood. According to Buchmann (12) the hemophiliac has normal platelets, but they do not seem to yield their thrombokinase. Bedson (13) has shown that removal of the platelets (thrombokinase) from the blood is one of the chief factors in the production of experimental purpura.

It is a well known fact that citrated blood does not clot—probably because the calcium is changed to a non-ionizing state; but if calcium be added to this blood to a certain concentration (up to about 18 gm. per liter) it will clot, though not at a higher concentration.

We also know that thrombokinase from tissue substances definitely hurries clotting(14).

Diseases characterized by slow coagulation:

The conditions to be considered from a clinical viewpoint are: Hemorrhage of the new born, hemophilia, the purpuras, and traumatic hemorrhages.

I will not go into a consideration of the symptomatology, etc., of these conditions, for you are all familiar with them, and for purposes of review they can be found in any standard text book. I will endeavor to give you the most recent methods of treatment and possibly suggest some new paths for further efforts. The only purpuras with which we need concern ourselves in this paper are purpura hemorrhagica and purpura fulminas. Under traumatic hemorrhages our concern is with concealed hemorrhages, e. g., traumatic hemorrhage of the new born, or concealed hemorrhage during surgery and following an accident. We should keep in mind the fact that intracranial hemorrhage is frequently a local manifestation of a general condition and is not necessarily associated with trauma during parturition, although it is nearly always attributed to that(15).

TREATMENT

Generally speaking, drug therapeutics is of very little value.

Epinephrin has been used with very doubtful results. In using it, we must remember that it is very powerful and may aggravate the condition by damage to the small vessels. It has been used with good effect in hemorrhage of the new born, being injected by way of the umbilical cord.

Gelatin has some advocates for use in hemorrhage of the new born.

Calcium lactate, about 20 to 30 grains a day, has given some results, but has been shown to be of little value as an emergency drug (16). The administration of calcium salts according to Lapenta (17) is irritational because it has been proved that an increase of Ca ions in the blood beyond the physiological point prevents coagulation, and cases of diminished coagulatibilty due to the deficiency of calcium are rare. It has been shown that the administration of sodium citrate intravenously, intramuscularly or subcutaneously results in prompt and pronounced shortening of coagulation time (18). This lasts definitely for about three hours, and there is a return to normal in from twenty-four to forty-eight hours.

As a possibility for further development we must consider the X-ray also, for it has been shown that raying of the splenic, hepatic and intestinal areas results in a diminution of the clotting time (19).

But our mainstay thus has been the administration, by various means, of the different substances conserved in coagulation —the use of the thromboplastic substances. Of these, the best so far is transfusion. Besides supplying the needed elements in a natural way, we make up for the loss of blood due to hemorrhage. Buckman (12) states that transfusion of fresh, unmodified normal blood supplies platelets (thrombokinase) to help restore the normal process of coagulation. Falls (20) states that transfusion of citrated blood in hemorrhages is not always available, and for patients over six months of age we must consider the necessity of obtaining blood that falls in the proper group. Weil (21) advises against subcutaneous injection of whole blood on the ground that the clot acts as a foreign body and often causes subsequent hemorrhage. He also states that transfusion can be used on occasion for emergency, but not repeatedly.

Our next best method is serum treatment. This is efficacious in hemorrhage when it can be used locally, by ingestion in gastric hemorrhage, intravenously if it is human serum, or intramuscularly.

Weil (21) has a preventive treatment for hemophilia, as follows: 20 cc of serum, either human or animal, is given every two months or at the very least every three months. He finds that the rectification resulting lasts for six weeks to two months and that the anaphylactic reactions are usually small and not important. He has several cases which have not been treated for years and have had no hemorrhage since treatment.

Commercial thromboplastic substances are of two types; those made from tissue substances and those made chiefly of blood elements.

Mills (14) has shown that tissue extracts accelerate the clotting of blood in a very definite manner. The active tissue substance will not react with the blood fibrinogen to form fibrin except in the presence of soluble calcium salts. If injected intravenously, rapidly and in sufficient amount, tissue extracts cause intravascular clotting and death. Injected slowly and in smaller amounts, the blood is rendered partially or completely non-coagulable. This non-coagulability apparently depends on the gradual removal of the greater part of the fibrinogen of the blood stream.

The active principle of tissue extracts (22) is in part protein in nature, so that removal of protein reduces the activity of the material which consists of 41.6 per cent phospholipin and 58.5 per cent protein. On separation they lose their activity. Addition of phospholipins to the active material as it exists in the lungs increases its activity fourfold.

In working on cephalin, Gratia and Event (23) have shown that a mixture containing 65 per cent of pure cephalin has a marked accelerating effect on the coagulation of recalcified oxalate plasma.

Commercial examples of such thromboplastic substances are: kephalin, thromboplastin, coagulin. These substances shorten coagulation time to approximately one-tenth, e. g., from ten minutes to one minute. The tissue extracts which Mills (24) found to be most active are, in the order named: lung, kidney, heart, brain, spleen, thymus, testes, skin.

But, in using these substances, we must always keep in mind the fact that if given intravenously they often produce intravascular clotting, with resulting death.

Examples of products made from blood elements are coagulose and hemostatic prothrombin.

Hemostatic serum (17) is probably the better agent of the two. It depends for its activity on prothrombin and thrombokinase, natural ingredients of blood serum, and anti-antithrombin, a biologically developed product.

Serums administered intravenously have, apparently, no direct coagulating effect upon the blood. They seem to be incapable of overcoming the fluidic balance of the circulating blood, though they contain two of the elements that are involved in the physiologic mechanism of blood coagulation, and one of them (hemostatic serum) contains a third element which certainly assists in the coagulating process, though it is not demonstrably present in normal blood. Another element involved in blood coagulation is present in the blood of the patient, namely the calcium; but still there is one factor lacking, one that is conditioned upon actual rupture of the blood vessel. It is presumed that, until such rupture occurs, the anti-antithrombin introduced into the blood when hemostatic serum is injected is offset by the presence and continued formation of antithrombin in the blood, but when a break in the continuity of the blood vessel occurs the tissue thrombokinases thus liberated turn the scale, so that coagulation takes place at this point only. This, of course, is what occurs normally; and to bring abnormal blood up to the normal level without violence, a serum product should be used, if any, that will simply accentuate or strengthen the coagulating potency of the

blood, having no direct thrombotic or coagulating effect.

The question naturally arises: "How is the activity, and hence to a certain extent the reliability, of tissue extract and other coagulants determined?" Some are tested in vitro, where the conditions are manifestly not the same as those which attend actual hemorrhage; and others, notably hemostatic serum (25), are tested by administration to animals after the average clotting time of the animal's shed blood has been learned by means of tests made with several small specimens drawn at brief intervals and timed in the test tube to a point where the tube can be inverted without showing more than a trace of fluid blood. The coagulant is administered intravenously, and on subsequent withdrawal of blood the clotting time of the specimens is noted in comparison with the natural average clotting of this particular animal, as previously discovered. Precautions are taken to avoid the possible action of blood film in the test tube, or stimulation of the clotting process by fortuitous circumstances of any kind. Concurrent results from the use of blood drawn from different animals of this same species enable the expert to secure what may be considered accurate data as to the reliability of the tested coagulant—provided it can be counted on to remain unchanged in the marketed packages for a reasonable length of time.

This brings us to the second question—the permanence of commercial coagulants. Some of these are quite active at first, especially when applied directly to the bleeding point, but soon part with their peculiar properties, so that their use in practice is always problematical. The permanence of natural blood serum in liquid form is a matter of a few weeks, or months at most; but the desiccated whole serum (coagulose) is more permanent; and hemostatic serum perhaps because of the anti-antithrombin it contains, retains at least a fair proportion of its activity for three years.

It is to be remembered, of course, that the effectiveness of all coagulants is restricted by the fact that they do not influence the tone of the blood vessels, but only the chemico-physiologic properties of the blood. Post-operative bleeding will sometimes persist notwithstanding the use of active blood-coagulating agents. The avenues of escape for the following blood are too considerable to be closed by clot formation. An arterial tonic may be required.

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GASTRIC OBSTRUCTION

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Gastric obstruction, gastric retention, and decreased motor power of the gastric walls are conditions which, too frequently, are classed as synonomous, and definitely regarded as surgical. It is my purpose to point out the more exact methods of diagnosis in differentiating organic gastric obstruction from gastric retentions, altered gastric motility, hypersecretions, gastrosucorrhae, gastrochronorrhae, and extra-gastric conditions affecting motility. There are also many pitfalls and fallacies encountered in the interpretation of symptoms and physical findings which have led to error in the diagnosis and treatment of gastric obstructions.

The causes of true organic obstruction may be conveniently classed as extra-gastric and intra-gastric; and each of these may be further classed as malignant or benign. The most common extra-gastric obstructions are due to tumors and inflammatory swelling with resulting adhesions, within the bile-tract, pancreas, liver and small and large intestines. The intra-gastric obstructions are usually due to peptic ulcer, carcinoma, syphilis, tuberculosis, fibromatosis, polycystic tumors, sarcomas, hair-balls, or adhesions resulting from many of the forementioned conditions. For the purpose of clearness and to avoid misunderstanding, I shall omit from this paper a discussion of obstructions at the cardiac orifice and esophagus, and also congenial pyloric stenosis of infants.

Obviously, one is first concerned with determining whether true obstruction exists before diagnosing its exact location and cause. Fortunately, there are several very good methods at our command if we interpret them properly:

- Vomiting and vomitus.
- Succussion signs.
  - History of peristaltic waves and weight loss.
  - Thirst and small stools.
  - Visible peristaltic waves (natural or induced).
- Fasting gastric residuim.
  - Ewald Test Meal.
  - Rehfuss Fractional Meal.
  - Seven Hour Food Motor Meal.
  - Salol Test.
  - X-ray.
- Exact and complete neutralization of gastric acidity.

When in doubt as to the type of vomiting or the kind of vomitus, give the patient food and drink and produce vomiting. Cumulative vomiting is that which occurs after the stomach should be empty normally. With a mixed meal, the stomach should be empty in seven hours. If the patient gives a history of vomiting more food than was eaten at the time of the last meal or if food is vomited which was eaten the day before, it usually means organic obstruction. Such vomiting, however, may occur with a dilated, flacid, atonic stomach, following any strong emotion, such as fright, anger, or sorrow, vertigo, and other conditions. If this type of vomiting occurred regularly at definite intervals, independent of the above conditions it would be diagnostic. Or if with this vomiting, we found the vomitus to contain blood or sarcinae, yeast, Op-Boas bacilli or lactic acid, and perhaps accompanied by visible peristaltic waves—then the diagnosis would be certain. This point, I wish to emphasize—that two or more signs of obstruction, with none conflicting, is of the utmost importance in establishing the diagnosis. Any one link missing among the positive signs, might be the first reason for disposing of the case as among the pseudo-obstructions such as the functional neuroses, pyloric spasm, and extra-gastric disease with hypersecretion, or gastrosuccorrhea.

Splashing sounds, in the stomach, to quick palpatory-percussion six to eight hours after having taken food or drink is evidence of retention, but not necessarily obstruction, since it may be due to continued secretion and not to food.

Frequently a patient will say that a crawling or worm-like motion is felt traveling across the abdomen and accompanied by rumbling and splashing. If you then bare the abdomen and visualize elevations and depressions moving across the epigastrium from left to right, obstruction is practically always present except in case of a thin lax-walled individual. These waves may be intensified by carefully distending the stomach with air or gas; they may be interpreted as due to great hypertrophy of the stomach muscles, acquired in attempting to overcome pyloric obstruction, which actually lifts up the anterior abdominal wall while contracting.

The normal morning gastric residue usually consists of 20 to 30 c. c. of clear gastric juice, testing about 16 and 30 acids. If it exceeds 100 c. c. or if it contains from 10 to 50 per cent food residium, it is good evidence of retention.

The normal Ewald test meal (1 hour) should not exceed 150-200 c. c. in amount. If it contains sarcinae or Op-Boas bact. it always means obstruction. This secretory meal also aids greatly in differentiating the kind of obstruction.

The fractional Rehfuss test meal not only tells us whether we have a normal acid curve, and a retention, but it tells us whether it is digestive, inter-digestive, or continuous hyper-secretion. I do not believe that all of these hyper-secretions are due to secretions from the acid-producing cells, as is inferred by most authorities. They cite cases of hyper-secretion in achylia, which is contradictory. Since the chief cells in the cardiac area, in the necks of the fundus glands, and in the pyloric glands are weak in zymogen granules, and take the strains of mucus cells, it seems reasonable that they might be the most prolific secreting cells when excited or irritated by a lesion. I have seen cases of obstruction, both ante and post-operative, in which the stomach poured out from four to six quarts of watery fluid daily in excess of intake by mouth, literally drowning the patients in their own stomachs. The material often showed no free acid, and one might venture that the material was a transudate from the large, dilated gastric veins and that it did not come from the partial cells, and probably not in such quantities, even from ferment and mucus-producing chief cells.

The seven-hour food motor meal consisting of carrots, potatoes, prunes, bread and butter, eggs or fish and tea with leaves, is simple and efficient. Nothing should be obtained from the stomach in seven hours. This meal, as well as the fractional meal, may allow the food to go through, but show a large amount of secretion remaining. This

should be sharply differentiated from food retention and true organic obstruction, as this may be the deciding point between operative and non-operative treatment. It is also quite frequently the point at which the Roentgenologist and Internist diverge in the final diagnosis. The facts are obviously in favor of the test meals which show the difference between food and secretion remaining in the stomach after normal time. The barium or bismuth may empty 50 or 75 per cent but during that time a continued or hypersecretion may occur which dilutes and suspends the opaque salt, still showing a fairly large shadow, and is generally interpreted as retention of the meal by the present volume estimation. Would it not be an exact method for Roentgenologists to accurately measure the amount of Barium introduced and the amount withdrawn with a stomach tube, rather than to relp on the inaccurate sight-volume estimation?

The Huber-Salol test has some value but is now rarely used because of more recent methods. It consists of giving one gram salol with a meal. If the urine gives the salicyluric reaction 27 hours later, gastric motility is impaired, and the degree is determined by testing the urine every 3 hours until the reaction disappears.

The X-Ray is of the very greatest value in diagnosing gastric obstructions, but it does not excel the methods already given. In the hands of less competent workers, it has led to great error, principally because we have been more profoundly impressed by what we have seen rather than by conclusions arrived at, more slowly, through a series of tests and deductions. It cannot find occult or fresh blood, sarcinae, Op. Boas bacilli, total and free acidity, achylia, hypersecretion or gastrosuccorrhae. Frequently, barium is retained in quantities of from 10 to 30 per cent, and yet a motor meal of carrots, etc., will pass in normal time; or the food motor meal may be partly retained and the barium pass readily. We eat food and not barium. The barium is frequently held back because of the diluting effect of a continued secretion holding it in suspension. The Roentgenologist must be extremely careful in reporting vertigo, nausea, headache or emotion if he notes a retention, and then repeat the work later before giving an opinion. Errors of this sort cause many patients to enter the operating room without obstruction. Retention due to suspected spasm should be watched and the work repeated on another day, and preferably, after placing the patient under physiological doses of Tr. of Bellandonnae. Scores of ulcers are missed by X-raying the cases while under the influence of alkalies and bland foods, which have destroyed the accompanying spasm and inflammatory swelling temporarily. Since most ulcers are diagnosed roentgenologically on the indirect signs, I make it a rule to never X-ray patients until medicines and alkalies have been withheld for several days, and then after coarse foods have been fed. Spasm of the pylorus frequently occurs reflexly from a sore, irritable bowel, due to cathartics and enemas. And more often, I believe, than spasm accompanying chronic appendicitis. Therefore, I withhold these irritants before X-ray examinations. In passing, I might say that the too common diagnosis of pericaecal tenderness and chronic appendicitis would not be so common if cathartics and enemas were withheld before the examination. It might appear that I value the X-ray very little, but such is not the case. However, I do not hesitate to disagree with it frequently. It has great speed, but I have learned to not become stampeded, and to have the patience to withhold final opinion, until all the diagnostic evidence has been submitted. In other words, I believe the X-ray should be used as only one of the many instruments of precision and its tricks and fallacies, as well as its merits, should be known and considered. The X-ray is probably the best single method of diagnosing gastric obstruction and location, but it cannot hold equally with the combination of methods given, which also differentiates between the kinds and degree of obstruction. The X-ray has diagnosed for me the following lesions, which I could not accurately determine by other methods, and I could not possibly get along without it; mesenteric hernias, gastro-colostomies, hair-balls, duodenal and pouches, obstructions in duodenum and jejunum, multiple diverticula, diaphragmatic hernias, hour-glass stomach, plastic linitis, polycystic tumors of stomach, gastric syphilis and fistulas of gall bladder and intestines, and Meckel's diverticulum.

After intra-gastric obstruction has been diagnosed and carefully excluded from functional retentions and hyper-secretions, and its location noted, it is then of the greatest importance to know its cause and degree. The importance of the cause and degree of obstruction, is forcibly impressed when one is fore-armed with the knowledge that the vast majority of all intra-gastric obstructions, are due to peptic ulcer or its complication, gastric carcimoma. Ulcer obstructs because of spasm, inflammatory swelling, cicatrix or malignancy, and we now have a way of diagnosing and differentiating these

different obstructions which the X-ray can rarely accomplish. It is a clinical fact that over 90 per cent of the ulcer obstructions can be made to completely disappear (as evidenced by X-ray or food motor meals) usually within from 7 to 14 days, by exactly and completely neutralizing the free HC1 of the stomach. Pepsin is inert in an alkaline or neutral media and therefore no corrosion takes place in the ulcer. This neutralization is accompanied by making numerous tests with a stomach tube and testing for free HC1. Each time following an acid test, a few grains more of alkali, and more albuminous foods are added to the menu until the test shows a non-acid medium. The small repeated tests also prevent over-alkalization. If you assume that peptic ulcers do not heal as do other ulcers of the body, chiefly because of the corrosive action of acid-activated pepsin, it is then clear why such a high percentage of real obstructions, accompanying ulcer, open up completely. Practically all medical treatments, and gastro-enterostomies are based on this principle of reducing corrosion to secure a cure. My own reasons for adhering to the corrosion theory were set forth in the State Medical Journal of February, 1920. There is no diagnostic value in partial reduction of free HC1, although partial reduction may stop all symptoms and eventually cure the ulcer. Corrosion and the height of the digestive curve is nearly as great with a weak free HC1. as with a strong HC1. and therefore no conclusions can be reached as to whether obstruction present, or whether it is due to benign cicatrix or malignancy. When all corrosive digestion has been positively proven controlled by the stomach tube, then it is a clinical fact that spasms and inflammatory swellings about an ulcer will disappear in from seven to fourteen days. If the cicatrix of an ulcer does not involve more than half the circumference of the duodenum or pylorus and the remainder is shut off by inflammatory swelling, the control of corrosion will open up most of these obstructions, also, permitting a full motor meal to pass out in normal time. This is not strange when one remembers that the chief business of the pylorus is to hold back food until rendered chymous and then to allow its escape only in very small spurts after every third to seventh contraction wave. The pylorus is not a gaping, inactive muscle, and a marked physiological damage is done where pylorectomy is necessary, and unprepared food is allowed to stream into the duodenum which may cause duodenitis and constant diarrhea. If, after 14 days of complete acid control the repeated motor meal does not pass through, one can be sure that the lesion is due to cicatrix, involving most of the circumference, or to carcinoma. A carcinoma in an ulcer practically always oozes blood, and neutralization of acid in case of malignancy rarely influences this bleeding because healing does not occur. By examining all the stools for blood while controlling the acidity, if the bleeding continues, one could be reasonably sure that cancer existed rather than benign cicatrix.

Since most surgeons recognize the added risk and the impossibility of excising ulcers in the majority of cases, a gastro-enterostomy is generally done. Again, most surgeons agree, with Moynihan, that gastro-enterostomies should not be done for ulcer, but for the complications of ulcer (usually obstruction). Here are Moynihan's exact words, "Gastro-enterostomy is most efficient only when gross mechanical obstruction exists. Under no circumstances and in compliance with no persuasion, however insistent, is the operation to be done in the absence of demonstrable organic disease." Moynihan based his opinion on the works of Kelling who, after doing gastro-enterostomies on dogs by all the methods known to surgery, summarized his work in this way. "The chyme takes its natural passage through the pylorus if the pylorus is at all patent rather than through any artificial opening." This work was later confirmed by Berg, Delbet, Blake and Cannon. Cannon stated Kelling's opinion in still stronger terms—"When the pylorus is narrowed so as to make difficult the passage of the chyme, the chyme is forced into the intestine by the natural way rather than through an opening remote from the greatest pressure." These experimental studies have since been confirmed by actual observations through duodenal and gastric fistulas by the X-ray on animals, and on human beings. Crohn and Wilensky and Bastedo have more recently reported a large number of poorly functioning gastro-enterostomies. I believe the chief reasons why some surgeons persist in doing this operation so often is because the symptoms subside so readily. Control of symptoms for a few months does not mean that the ulcer is healed or that it does heal sooner than after other partial controls of acidity. Patterson states that gastro-enterostomy controls about 30 per cent of the free HC1. by adding bile and pancreatic juice, and this has been confirmed by Boldyreff.

When Doyon devised the operation, he thought he was accomplishing direct drainage through gravity. The X-ray later

proved the contention of earlier physiologists that nothing leaves the stomach except by the contraction of its walls, because it and its contents are subject to the law of hydrostatics, that is, as if the stomach were a bag filled with water in a closed cask of water, remaining in the same position because being pressed on equally from all sides. So many complications follow gastro-enterostomies that one should consider it gravely the type of obstruction present, as Moynihan advised, before attempting to Some of the complications are: re-currence of old ulcer; new gastric ulcer formation with old opening closed; ulcer of the jejunum; vomiting from bile-regurgitation and from irritating and infectious secondary gastritis; kinking of the jejunum; obstructing adhesions and duodenitis with constant diarrhea.

The point I wish to emphasize is this: Moynihan and most physiologists and experimental workers agree that gastro-enterostomy is not a drainage operation at all, and should therefore not be done except where organic obstruction exists. Heretofore all organic obstructions were considered as more or less permanent, but this notion was exploded accidentally when Sippy, working out the treatment of ulcer by complete neutralization of free HCl, rather than by guessing at partial control, noticed that obstructions were letting up among the group of supposed operative cases. Now every case of obstructive ulcer should be further diagnosed. Is it due to spasm, inflammatory swelling or cicatrix (benign or malignant) because fully 90 per cent of them can be converted from operative obstructive group to the non-operative, non-obstructive group within a period of 14 days by actually neutralizing the gastric acidity. Is the obstruction really not obstructing the food, but accompanied by a high-grade continuous secretion which is retained and dehydrates the patient because of insufficient contracting through the pylorus? If so, gastro-enterostomy will seldom remedy it. When diagnoses are made along this method of procedure, and obstructions are found which do not let up, they are definitely surgical, and the Internist should waste no further valuable time trying to overcome them.

Obstruction of the stomach due to syphilis is often wrongly diagnosed because of insufficient evidence; usually stomach distress, plus a positive Wassermann. Syphilis of the stomach usually manifests itself at an earlier age incidence than carcinoma. The general symptoms of anorexia, emaciation, anemia, etc., are nearly always lacking. The X-ray usually shows a large filling defect, a channel stomach, or leather-bottle stomach, or more rarely, hour-glass constrictions or mutiple ulcerations. It also differs from carcinoma in that it frequently shows a large Roentgen defect and yet it can rarely be palpated, and rarely bleeds. The following rules have been formulated as acceptable evidence in the diagnosis of gastric syphilis. A demonstrable filling defect must show roentgenologically. A positive Wassermann should be obtained. Evidence of syphilis must be demonstrated elsewhere in the body. Anti-syphilitic treatment must alter the gastric defect on later X-ray examination. Eusterman and LeWald have reported the most cases of gastric syphilis.

Tuberculosis of the stomach, constricting hour-glass stomach, interfering adhesions, hair-balls, carcinoma, polystic formations and fibromatosis and other tumors are definitely surgical. Congenial pyloric stenosis in children is best treated by a Rammstedt operation or gastro-enterostomy.

CONCLUSIONS

It is hoped that I have outlined a sensible, practical method of diagnosing gastric obstructions as distinguished from the gastric retentions, and the abnormal functional secretory conditions simulating real obstruction. That of the true obstructions, I have made clear a method of differential diagnosis which aims to separate the surgical from the medical cases. I should like to impress the fact that gastro-enterostomy produces evil results as well as good, and that it should not be undertaken lightly, because the vast majority of obstructive ulcers will let up without it, and leave a normal physiological stomach. Internists should not waste valuable time in trying for results in cases of cicatrix that do not let up after 14 days of accurate acid control. All functional retentions and continued secretions are handled best medically. Syphilis of the stomach can be readily diagnosed by the method set forth, and rigid medical management will cure or relieve the vast majority of these cases. In gastric obstruction, the rule to follow is to regard all cases as medical until proof to the contrary is obtained, and when fortified with this proof, accept surgery at once, and with confidence.

*CLINICAL ALKALOSIS IN GASTRIC DISEASE

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In recent years considerable importance has been attached to changes in the acid base equilibrium of the body but hitherto the greatest interest has centered about shifts to the acid side and the frequency and clinical importance of alkalosis have not been well appreciated. However considerable evidence has been collected to show that alkalosis of clinical significance occurs frequently in a variety of conditions and is equally as important, if not more important, than acidosis.

It may be well to state in a brief way what is meant by alkalosis. As is well known, the body, by means of its ability to vary easily and quickly its acid and base content, ordinarily maintains its reaction at a fairly constant hydrogen ion concentration (7.4 to 7.2). The condition in which there is a shift in this acid base ratio in favor of the alkaline side, in other words an increase in the proportion of base to acid, has been named alkalosis and is comparable to the opposite condition acidosis. This condition known as alkalosis may occur with an actual increase in the content of base, with a normal content of base but a decrease in the acid content, or even with a decrease in the actual amount of base which is, however, still relatively large compared to the acid content. In addition alkalosis has been helpfully divided into two types. In those cases where there is a tendency to an abnormal increase in the ratio of base to acid and yet the body is able to maintain a normal hydrogen ion concentration the condition is spoken of as a compensated alkalosis. In those cases where the body is unable to maintain a normal hydrogen ion concentration and there is an actual shift to the alkaline side the condition is spoken of as an uncompensated alkalosis. Naturally the uncompensated type is more severe and of graver import than the compensated type. It is probable that in the majority of cases where symptoms occur the alkalosis is of the uncompensated variety. While changes in the acid base ratios are preferably detected by determining the hydrogen ion concentration and total carbon dioxide content of the whole blood technical difficulties have prevented the general clinical use of these methods. More commonly the carbon dioxide combining power of the blood plasma is determined. This method, though open to certain objections and possibilities of error, is fairly satisfactory for clinical use.

As might be expected from the foregoing, alkalosis occurs clinically in a variety of conditions. It may be produced simply by the administration of large amounts of alkali and some of the earliest reported clinical cases were of this type[1]. By this means there is produced, of course, an actual increase in the alkali content. Alkalosis is also easily produced by the excessive washing out of carbon dioxide by hyperpnoea. This type has been seen during attacks of hysteria, during a long physical examination and may easily be produced voluntarily[2]. More recently it has been reported as occurring during a case of encephalitis in which there was marked hyperpnoes[3]. Koehler[4] has recently reported it as occurring in clinical and experimental fever, probably the result of increased lung ventilation. In the cases where the alkalosis is the result of an abnormally high loss of CO_2 there is of course a normal alkali content, or, if the condition continues long enough there may even be an actual decrease in the content of base due to the elimination of the excess alkali.

The occurrence of alkalosis in gastric disease was first observed by McCann who noted it in dogs with experimental gastric tetany produced by ligation of the pylorus. This finding was confirmed by the work of Mac Callum[6], who showed that it could also be produced by excessive gastric lavage and it has since been observed clinically in cases of gastric tetany[2]. As is well known gastric tetany occurs in cases of pyloric obstruction associated with vomiting and usually with dilatation of the stomach and an increased amount of gastric secretion. It is probable that the alkalosis seen in these cases is the result of loss of hydrochloric acid in the vomitus. The relation of the alkalosis to the tetany is not as yet definitely settled, but evidence is accumulating to show that the alkalosis stands in a causal relationship to gastric tetany.

In addition to the alkalosis in gastric desease caused by the loss of hydrochloric acid, there is a second type which is merely the result of treatment with alkali so frequently used in this type of desease. This type has been fully described by Hardt and Rivers[7] and may be responsible for untoward symptoms sometimes occurring as the result of such treatment.

It occurred to us that an investigation of patients with common types of gastric disease in whom there was well marked vomiting, but not of the grade to be called extreme, might reveal the presence of an alkalosis even though

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the condition had not progressed to the point of tetany. A number of patients with various types of gastric disease, but principally with gastric ulcer, in whom there was more or less vomiting, were studied in regard to the carbon dioxide combining power of the blood plasma, the blood and urine chlorides and the hydrochloric acid content of the gastric juice and vomitus. Unfortunately we were unable to make determinations of the hydrogen ion concentration of the blood. In order that the administration of alkalies might not influence the picture the patients were not placed on the usual alkaline treatment nor were patients studied who had been taking alkalies just previous to entry. All the patients studied were left on the diets they were taking at the time of admission and in many cases the food intake was naturally very small. The fluid intake was likewise unregulated and was in many cases low. No attempt was made to select cases with marked pyloric obstruction though in practically all the cases obstruction was present to a greater or less degree. The vomiting varied in intensity and duration but most of the patients in whom was found an alkalotic state were having, or had just had a rather sharp attack of vomiting, though not of a grade unusual in such cases.

METHODS

The CO_2 combining power of the blood plasma was determined according to the method of Van Slyke[8]. The blood was drawn from the median basilic vein through a large needle under oil and the determinations made immediately. The blood chlorides were determined according to the method of Austin and Van Slyke[9] and the urinary chlorides according to the well known Volhard method.

RESULT OF STUDY

As a result of this study we found that some patients with common types of gastric disease associated with a not unusual grade of vomiting are in a state of alkalosis even in the absence of signs or symptoms of tetany, in other words, a pretetanic alkalosis. As might be expected the degree of alkalosis paralelled roughly the severity of the vomiting. Although in the absence of hydrogen ion determinations it is impossible to state definitely, it is probable that the more mild cases were of the compensated variety. In all cases the hydrochloric acid content of the test meal or vomitus was normal or high. In most cases the blood and urinary chlorides were found to be low, as was found by MacCallum[7] experimentally, and clinically by Grant[2]. It should be pointed out however that the chloride concentration in the body is probably decreased due to the low food intake in these patients.

ABSTRACTS OF TYPICAL CASES

Case No. 1. History. Mr. J. S., age 54, entered the hospital Nov. 10, 1922, complaining of epigastric distress. For twenty years he had suffered from periodical attacks of epigastric pain occurring two hours after meals and relieved by food and alkalies. For the previous year and a half the symptoms had been constant and more severe and he had lost twenty pounds. Shortly before entry there had been considerable vomiting and distinct evidence of retention. There had been occasional numbness of the hands. A few months prior to admission he had had a severe attack of abdominal pain which had been diagnosed "gall bladder colic."

Examination. Physical examination revealed definite peristaltic waves passing across the abdomen from left to right. Roentgen ray examination showed a dilated stomach with almost complete obstruction. A gastric analysis showed a fasting free hydrochloric acid value of 40 and a total acid of 62. The test meal showed a free hydrochloric acid of 28 and a total acid of 50.

Course. The patient was placed at rest in bed. On Nov. 14 the CO_2 combining power of the blood plasma was 77.8 vol.%, the blood chlorides were 352 mgs. per 100 cc. and the twenty-four hour urinary chlorides were 1.28 gms. By Nov. 16 with the rest and cessation of vomiting the CO_2 capacity had dropped to 59.1 vol.% and the total blood chlorides had risen to 461 mgs. per 100 cc. Operation was advised, but the patient wished to return home for a few days. During his stay at home there was a little vomiting. On his return to the hospital on Nov. 25 the CO_2 combining power of the plasma was 69.5% and the urinary chlorides 0.81 gms. He was transferred to the surgical department for operation, where an obstructing pyloric ulcer was found and removed, but the patient did not survive the operation. The numbness of the hands noted above was the only symptom of alkalosis and so signs of tetany were ever observed. It will be noted that with the cessation of vomiting the CO_2 combining power returned to normal and the blood and urine chlorides rose.

Case No. 2. History. Mr. M. O'C., age 52, entered the hospital on Nov. 11, 1922, complaining of pain in the lower abdomen. For eight years he had suffered from epigastric distress occurring about an hour after meals and relieved by food and alkalies. For the seven months prior to entry the pain had become severe and constant. He had vomited a great deal at times and had on occasion washed his stomach out with salt water. He had lost twenty-five pounds in the previous year.

Examination. On examination a dilated stomach could be mapped out and distinct peristaltic waves were seen passing across it from left to right. Roentgen ray examination revealed a huge stomach with almost complete obstruction. Gastric analysis showed a free hydrochloric acid value of 36 and a total acid of 54 in the fasting specimen. In the test meal there was a free hydrochloric acid of 38 and a total acidity of 60.

Course. The patient was placed at rest in bed. On Nov. 20 the CO_2 capacity was 61.4 vol.%. There was little or no vomiting. On Nov. 21 the total urinary chlorides were 1.325 gms. On Nov. 21 and 22 there was some vomiting, about 2,000 cc. in all, with a free hydrochloric acid value of 30 in the vomitus. The CO_2 combining power rose to 70.0 vol.%, the whole blood chlorides were 420 mgs. per 100 cc. and the urinary chlorides were 0.6 gms. On the 22nd the patient was transferred to the surgical department, where on operation a duodenal ulcer was found and a posterior gastroenterostomy was done.

The patient made an uneventful recovery and has remained well.

Case No. 3. History. Mr. L. P. entered the hospital on April 4, 1922, complaining of vomiting, loss of weight and pain in the stomach. Until two weeks prior to entry he had felt entirely well. At that time he began to have vomiting spells and during the week before admission he vomited daily. At the time of admission any food caused marked distress and was vomited in ten or fifteen minutes. He also gave a history of periodical incontinence and difficulty in urination. He had lost twenty-five pounds in the two weeks prior to entry.

Examination. Physical examination revealed marked evidence of loss of weight. In the abdomen a large stomach was visible and peristaltic waves were seen passing across it from left to right. Roentgen ray examination showed a dilated stomach with complete obstruction.

Course. The patient was placed at rest in bed. On the day after admission the CO_2 combining power of the blood plasma was 85.3 vol.%, the whole blood chlorides were 455 mgs. per 100 cc. Any determination of the urinary chlorides was impossible owing to the incontinence. The vomiting continued, but in smaller amounts and on the 6th and 7th an examination of mixed specimens revealed an absence of free hydrochloric acid, but a total acid of 44. On the 7th the CO_2 combining power was 72 vol.% and on the 8th it was 72.9 vol.%. On the 8th the patient was transferred to the surgical department, where an operation was performed and a far advanced gastric carcinoma was found. The patient died the day following operation. At no time were any signs of tetany noted.

Case No. 4. The following case is presented to show the effect of a severe alkalosis with the development of tetany and a fatal outcome. Although we unfortunately were unable to make the necessary laboratory examinations to confirm the presence of the alkalosis, we believe the assumption justified by the clinical features of the case.

History. Mr. H. R., age 26, entered the hospital on Sept. 22, 1922, complaining of sour stomach and burning eructations of gas. At the age of fifteen he was struck in the stomach, and for four years afterward had had irregular and infrequent attacks of stomach trouble. At nineteen these attacks became so severe that he entered a hospital. He returned home without relief, but while at the hospital he learned the use of the stomach pump and from that time he used it almost daily, sometimes emptying his stomach five or six times a day. He vomited occasionally, but only when prevented from using his stomach tube.

Examination. Physical examination was quite negative aside from evidence of loss of weight. Roentgen ray examination showed a large stomach with some obstruction.

Course. The patient was allowed up and about the ward and appeared to be fairly comfortable until the 29th, a week later. His stomach tube was taken from him, but it was later learned that he obtained another, which he hid and used secretly several times a day. On the 29th he complained of nausea and it was noted that he visited the toilet many times, where he presumably used the stomach tube. On Sept. 30, he vomited once and asked to have his face and hands rubbed, stating that they felt stiff and out of place. He was not seen by a physician at this time, but it is probable that he had a carpal spasm. On Oct. 1, he vomited again and was confined to his bed. Later in the day he was suddenly seized with a tonic spasm which passed into a clonic convulsion lasting for one and one-half minutes, during which time he was unconscious. He regained consciousness and remained conscious, sleeping at intervals, until evening, when he sank into a semi-comatose condition. The respirations became very slow (six per minute) and were extremely shallow. The temperature was subnormal. During the 2nd and 3rd he remained in a semi-conscious condition. Muscular twitchings were noted at intervals, there was difficulty in swallowing at times, he developed hiccoughs and the respirations remained the same. On the 2nd and again on the 3rd there occurred convulsive attacks more severe and of longer duration, but in other respects similar to the attack occurring on the 1st. He gradually sunk into a deeper coma, the temperature gradually rose to 107° F., signs of a terminal pneumonia developed and he died on the evening of October 3rd. Autopsy revealed the presence of a dilated, spastic stomach with a healed prepyloric ulcer, acute multiple abscesses of the lungs and a metastatic pneumonia. It was later learned that the patient had had two similar attacks, the first four months previously, during which he had remained in a semi-comatose condition for from eight days to two weeks. We believe this to be a case of chronic alkalosis with acute attacks of tetany induced by the excessive removal of gastric secretion from the stomach by habitual use of the stomach tube.

EFFECTS OF ALKALOSIS

The effect of alkalosis itself and its relation to the symptoms observed are, as yet, not definitely determined. It has been argued, notably by Greenwald[10], that the effects (gastric tetany) are due, not to the alkalosis itself, but to the toxic action of sodium. While such may play a part in those cases where the alkalosis is due to the excessive intake of alkali it seems unlikely that this may play a part in the other types. A more likely explanation is made possible by the work of Morris[11]. He has shown experimentally that an alkalosis may reduce the oxygenation of the arterial blood and also interfere with the passage of oxygen from the arterial blood to the tissues. Hence there results a general anoxemia or suboxidation throughout the body. On the basis of these results he suggests that the tetany occurs as the result of an increased excitability of the myoneural junction caused by the suboxygenation.

The importance of alkalosis in relation to gastric desease is three fold. In the first place there is the probable anoxemia with its general ill effects. Second is its relation to treatment. Patients with an alkalosis are in a pretetanic state. The danger lies in the tendency at present to treat patients with gastric desease and particularly those in whom there is vomiting and loss of fluid with oral administrations of and injections of fluid in which are incorporated alkalies and by gastric lavage. Such treatment will increase the alkalosis and may cause the onset of tetany. Finally, in those cases in which operative interference is attempted the alkalosis may affect adversely the surgical risk although probably offset somewhat by the acidotic tendency of the anaesthetic.

The treatment in these cases consists in the

control of the vomiting. Rest and restriction of food suffices for the milder cases and is particularly indicated prior to operation. In the more severe cases and particularly in those which develop signs of tetany early surgical intervention is often indicated. Operation has not in the past, however, proven particularly successful, possibly due to the alkalosis. In such cases and particularly prior to operation the proceedure suggested and used by McCann[12] may be indicated. It consists in the intravenous injection of ammonium chloride which tends to produce an acidosis and thereby balance the alkalosis.

SUMMARY AND CONCLUSIONS

Patients with the more common types of gastric disease in whom there is vomiting which need not be extreme may show a shift in the acid base equilibrium to the alkaline side, in other words, an alkalosis.

Abstracts of four illustrative cases are presented:

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*CERTAIN FACTORS TO BE CONSIDERED IN PROGNOSING CURE OF PEPTIC ULCER

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Modern medicine is passing from the stage of emipiricism to that of fact. Improvements in academic curricula, instituted and elaborated during the past three decades, are proving warranted by the mass of accurate information which the investigative scheme of attack is yearly making practically available. To emphasize this point, one need only mention the changed pathologic, biochemic and clinical conceptions, which in less than ten years, have occurred with respect to such ailments as diabetes, goitre, arthritis, nephritis and the severe anemias.

To this steadily growing list we may well add peptic ulcer. In this respect, it is no disparagement to the acumen of Cruveilhier, Rockitansky, Mueller, von Leube, Virchow, the elder Fenwick and Wilson Fox, nor to the host of "moderns'-to within the last decade," to state that much of what was observed, practiced and written of is being proven incomplete and empiric.

Despite numerous pathologic studies of peptic ulcer, the findings have, with a strange constancy, been considered wholly from the viewpoint of the damage to gastric and duodenal mucosae. There has been a curious neglect with regard investigating what types of systemic upset preceded or accompanied the local, viscus anomaly. It is true, that along these lines suggestive work has been advanced by Rosenow, Ophuls, Mann and by Rehfuss, yet in the actual, practical handling of the patient affected with peptic ulcer, little attention has been given to these researches. Ulcer patients, generally, are still being treated with the empiricism laid down by that ancient clinician, Celsus, who, in his classic "De Medicina," suggests "remove or neutralize the acid which causes (?) the ulcer and nature will do the remainder." L. Mueller's (1860) translation of Celsus' precept into the vernacularly impressive and readily understandable, if inaccurate, term "corrosive action" of gastric juice (presumably, "corrosive" from the effect of hydrochloric acid acting upon stomach and duodenal lining) certainly proved to be no advance, scientifically. It only created a confusion, etiologically and therapeutically, with respect the entire ulcer problem. Undoubtedly, Mueller's dictum of "Das Corrosive Geschwur" strengthened the empirician already dominant in peptic ulcer management and left an imprint upon therapeutics which is still strong among those clinicians who have had little opportunity of observing ulcer pathology; who have diagnosed ulcer largely upon questionably significant symptoms (which diagnoses have not been checked by pathologic studies); who have considered *relief* of digestive distress as signifying *cure* of disease and whose case records, scant and incomplete—particularly incomplete with respect following up the individual patient and appraising his status, months or years following the so-called clinical "cure"—have returned evidence which will not bear

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scrutiny. All too frequently "kur"—a mode of management—has been confused with "cure"—the eradication or the permanent repair of an anatomic fault. The peptic ulcer problem demands recasting on modern lines, not only pathologically and clinically, but particularly prognostically.

It is now eight years since, in a series of articles, I called attention to the fact that pathologic, bacteriologic, experimental and clinical studies of peptic ulcer all indicated that, in such affection, one is dealing with a form of systemic or constitutional disturbance in which the ulcer is a local, gastric or duodenal complication. In acute ulcers, such lesions may be compared to the herpes accompanying pneumonia or to the intestinal ulcers of typhoid fever. In chronic ulcer, a not inapt comparison may be made with various leg ulcers, lesions of the kidney or sclerotic placques on the aorta. In such visceral disturbance, apart from the dangerous complications likely to occur as a consequence of progression of pathologic damage locally, the systemic departure from the normal demands quite as serious consideration as does the special gastric or duodenal defect.

Further, I emphasize that it was the systemic disturbance, frequently continuous and progressive in type, which should be considered as being the cause of the peculiar history of ulcer, particularly with respect to the curious "periodicity" feature—the "attacks"—characteristic for 84 per cent of ulcers; for grave accidents, as haemorrhage, and perforation; for the so-called "relapses" following a therapeutic seance; for the long drawn-out history typical of many peptic ulcers and for permanent cures; these last, not rarely, indicating cessation of the underlying, primary etiologic fault, and, hence, assuming the aspects of *spontaneous* cures.

Clinical studies of gastric and duodenal extracts from proved ulcers of all types, histologically considered, made on my material at the Mayo Clinic and in my departments at the Augustana and the St. Elizabeth Hospitals, showed that acid values bore no relationship to the position or type of ulcer, its duration, its activity or quiescence, nor, with the possible exception of bleeding or obstructive ulcers, to the threat or the presence of grave complications. Hydrochloric acid and pepsin values were shown to be accidental to the individual at different stages of examination. Groups of patients, pathologically affected with like kinds of ulcer, in similar positions and at corresponding ages returned acid and pepsoin values in no way resembling each other, and quite similar to the values obtained in ulcer patients wholly dissimilar with respect histologic and positional kind of lesion, age, sex and under different food and environmental influences.

The obvious conclusions from the above studies, compiled from accurate observation upon 2,160 operatively proven duodenal ulcers and 876 similarly demonstrated gastric ulcers, are that peptic ulcer is not only the local duodenal or the gastric complication of an acute transient or a chronic, progressive, systemic disturbance of varied etiologic origin, but that its clinical management can not promise hope of success if the local gastric or duodenal defect receives practically all the attention, while the primary, systemic fault is allowed to progress unrestrained. With such management, fortunate, indeed, are those cases where the ailment spontaneously subsides. The individual who *harbors* the ulcer requires therapy quite as much as does the ulcer itself. Particularly, is it unscientific and empiric, to regard as a therapeutic problem the neutralization of free hydrochloric acid and to consider chemic restrains of acid production desirable as an index of healing and freedom from grave complications. Ulcers, in the presence of no, or of low free HCl, often enough, progress to the point of most dramatic crises, while ulcers, bathed in what one, empirically or in the awe of seventy years of uncorrelated, clinical tradition, assumes to be strikingly high, often subside quickly and frequently seem to heal permanently.

This introduction would seem a necessary prelude to the chief topic of this paper—an article dealing with certain aspects of factors to be considered in prognosing permanent cure of peptic ulcer—cure, not relief of symptoms for a varying period of time. Certainly, the question of what a physician has to offer in the way of assurance to his peptic ulcer patients deserves attention. It is a query made to us daily in our consulting rooms and our clinics. What reply can we honestly make to our patients? On what basis, from experience, collected and tabulated records, and from the literature, can we state that *this* ulcer will heal without operative procedure, *that* will go on to serious complication and another will progress to malignancy?

I have made an attempt to arrive at such an appraisal from a re-study of our records of peptic ulcer. These cases represent patients from all walks of life, from approximately all sections of the country, of ages from 16 to 87 and with the sex ratio practically three males to one female. The study of 700 duodenal and 250 gastric ulcers is not yet complete, but certain data may be submitted here to be taken as facts passable at face value.

In a symposium so comprehensive as presented by today's program, it is neither necessary or proper to exhibit the lengthy details which this study is returning. Only a summary

of what has thus far been developed can be reported.

In order to make an approximately accurate appraisal of what clinical course is before the patient upon whom peptic ulcer is correctly diagnosed, I have endeavored to "tie a tag" on him, so to speak, at the moment of diagnosis and then to travel with him, as an observant Planchet, along the highway which has been the scene of his dyspeptic adventures. That the story has to be recorded toward the termination of his digestive upsets and reconstructed back from its end to its beginning in the *single* patient, may admit of inaccuracies of observation and interpretation, but, in a great group of similarly affiliated, the major conclusions would appear warranted.

If one insisted that his ulcer patients kept a diary of their experiences from the inception of illness, he would achieve a far different conception of the ailment and its varied course than he secures from text-books, journal theses or by contact with the dyspeptic on the occasion of an "attack" or a grave complication. The lesson, most impressively emphasized, would seem to be that true peptic ulcer exhibits a clinical course widely varying in different individuals, and that, for each individual affected, no dependable clinical prognosis were possible at any stage of the ulcer's course. Such admission may seem radical and pessimistic to those clinicians who have grown accustomed to consider relief of symptoms and return of bodily vigor as indicative of healing, especially when some personally devised system of ulcer management has been carried through; it may seem particularly disappointing to those who claim to completely cure from 90 to 95 per cent of all peptic ulcers by pet non-surgical or surgical procedures. But, should the patient whom I have "tagged" at the moment of his ulcer diagnosis have required the physician making the diagnosis (and who was assumed to have had special knowledge of the subject) to write on the back of the "ticket" what would be the ultimate course and outcome of the ailment, and then, if this same patient had returned to the diagnostician after his years of wandering, perhaps the disappointment in the outcome of the "clinical guess" may have been atoned for by the lesson which the patient's experience carried. It is true, that such incidents happen to physicians daily and yet, how often is the message they carry neglected or unappreciated? However, a certain ancient wisdom or shrewdness deters us from prognosing, *in writing,* the future of our ulcer patients, although some find it easy, glibly to quote high cure percentages. Herein, from the patient's viewpoint, lies the weakness of our position and herein, we cultivate among ourselves a field for controversy.

This state of affairs arises seemingly because we neglect to recognize the systemic faults associated with the majority—perhaps, all—of ulcers. We fail to "follow through" the case to its end, because we are led off into numerous enticing physiologic and chemic bays, while missing the large aspect of the main stream and because we find it easier to cling to simply practiced, therapeutic procedures applicable to groups of patients, or the administrations of nurses and internes, rather than to analyze, personally, the individual patient and treat him, not by rule-of-thumb, but according to his special demands. The average busy gastro-enterologist does not come sufficiently closely into contact with his ulcer patients to have much more than a vague impression of what is going on.

Much information, prognostically useful, may be derived from knowing that when ulcer patients come to me they have had an illness time-duration averaging 20.3 years. The individual range was from two months to forty-eight years. During rather less than an average time of eighteen years, these patients had been dyspeptic by "attacks" or at intervals. Their digestive health between attacks had commonly been excellent. They, then, exhibited no so-called "ulcer history"; at such times, they and their medical advisors had every reason to regard them as being "cured." Particularly, since, without any special change of habits or environment and frequently when living under closely supervised medical, hygienic and dietetic regimen, ulcer "attacks" re-appeared. These attacks usually led to another "cure," and another prognosis that the digestive troubles were ended. There is, in our series, a monotenous repetition of such experiences, until within an average period of 2.6 years (an individual variation of from six weeks to three and one-half years) of the patients' coming under observation. At such time, commonly the "interval" or "periodicity" feature of the digestive anomaly was lost and the patients had become *constant* dyspeptics; often enough, in constant invalidism, under medicinal or stomach tube routine, dietetic restriction or suffering from poorly devised or performed surgical procedures. This *constant* type of dyspepsia was shown by pathologic studies to be due to dense scar formation, with obstruction or deforming lesions, to protected perforation involving other viscera, to repeated gross hemorrhages or continued blood seepage or, in the case of gastric ulcer, to malignant change at the ulcer edge.

Only eighteen per cent of our patients had not been under carefully supervised "ulcer management". One old gentleman gave a his-

tory of forty-eight years of typical ulcer dyspepsia, but because he lived in an isolated community, had never consulted a physician until a hemorrhage brought him to the clinic and an ulcer of the arterio-sclerotic type was demonstrated, the base wide open to the blood vessel. In my series, the number of times systematic "hospital cures" had been instituted, ranged from one to as many as fourteen. Forty-eight per cent of the patients had experienced four or more "ulcer cures." These regimens were commonly of the type long since suggested by Leube, Lenhartz and Ewald and usually had been carried out by leading gastro-enterologists. Forty-two per cent of the patients who had "hospital cures" had been treated by the Leube-Sippy method. Of this group, 51 per cent had been under Sippy's personal management at least once (20 per cent) and from two to eight times (80 per cent). And yet, at operation, clinically and by roentgen study, active ulcer, gross deformity from ulcer scar, or malignant degeneration was shown to exist. Practically all the patients, who had not been under careful professional supervision (18 per cent of the total group) had become alkali addicts, stomach tube users or both. Such regimen had in no wise tended to permanent cure of their gastric or duodenal lesions.

Of the whole group of patients, evidences of chronic kidney irritation (a comprehensive term was demonstrated in eleven and one-half per cent. The urine of such patients contained albumin, casts or both. In the light of recent reports by Hardt of the Mayo Clinic, or alkalosis following alkaline therapeusis of ulcer patients undergoing the Sippy management, such urine findings are suggestive, prognostically. The symptoms of alkalosis, described by Hardt and others, were recorded in the histories frequently enough—particularly the early intolerance of milk with alkali, the nausea and irritability. Three instances of tetany were observed, during the past twelve years, one of which proved fatal. It occurred in association with a large duodeno-pyloric ulcer and obstruction.

Not an inconsiderable prognostic significance must be attached to the *systemic or constitutional faults* associated with the presence of peptic ulcer. Thirty-one per cent of the patients had ulcer symptoms appear during or shortly subsequent to an acute infectious disease (flu, la grippe, acute tonsillitis, pneumonia, typhoid fever, streptococcus sore-throat, mastoid or sinus disease, etc.) Nearly two-thirds of the cases experienced recrudescences of ulcer dyspepsia in Spring and Fall, seasons at which common, acute infectious ailments are prevalent. Nine per cent of these patients gave histories of lues or were Wassermann positive by at least two tests. It is thus seen, that approximately 40 per cent of the total ulcers of this series were associated definitely with an infectious, systemic ailment. To this number may be added 18 per cent in whom active infection was demonstrated about teeth roots, in tonsils, pharyngeal adenoid tissue, or sinuses accessory to the nose and ears. Similar infectious foci also were common to that group of ulcers whose etiology seemed quite definitely dependent upon acute infectious ailments.

That evidences of *infection foci* must be looked for, distantly remoped from those readily demondemonstrated and eradicated in the head, is shown by the obserfation that in the whole group of duodenal and gastric ulcers, acute or chronic focal infecctions were demonstrated in the appendix in 39 per cent, in the gall bladder and ducts in 27 per cent, (calculi in 7½ per cent), in the Fallopian tubes in 3 per cent and the kidney pelves in 1½ per cent. The proof that 66 per cent of duodenal and gastric ulcers are associated with pathology due to infection in the appendix or the gall tract, and that such lesions are known to exert a definite influence upon both gastric secretion and motility, imposes both a diagnostic and therapeutic responsibility upon those who treat peptic ulcer whether non-surgically, or surgically. Frequent enough, particularly in the adolescent, the removal of an appendix or the removal of or drainage of a gall-bladder, not only causes all so-considered "ulcer symptoms" to vanish, but the surgical exploration clearly shows that ulcer is absent, or, if present, is represented by innocuous scar. So common in the young are sub-infections of the appendix and the gall tract responsible for the so-called "hyperacidity" syndrome (actually, a gastric motor anomaly bearing little, if any relation to a secretory fault) and "acute" ulcer symptoms, that, in my clinic, it has become the rule to make no unqualified diagnosis of peptic ulcer in the adolescent, unless the syndrome has been accompanied by a gross hemorrhage (in females, not associated with the menses) or the roentgen ray has demonstrated a constant defect. My experience, gathered from following patients to the operating table and from statistics of personal cases, teaches that barely 9 per cent of patients under the age 31 who experience the so-called "hyperacidity syndrome" actually have gastric or duodenal ulcers. Their dyspepsias are caused chiefly by subinfections in the abdomen, particularly in the appendix or the gall-tract, or are produced by motor or secretory unbalance of neurolgic, dietetic, endocrine or environmental origin. And yet, text books constantly reiterate, on no evidence whatever, that peptic ulcer incidence predominates during young adult life. One such text-book interpretation of what are commonly motor,

gastric defects, (but loosely is called, "hyperacidity,") ulcer is diagnosed and treatment instituted. It is liberal to say, that, in the majority of hospital services where peptic ulcer is being non-surgically treated, not more than half of the subjects are actually affected with the ailment. It is not necessary to emphasize further the huge prognostic error arising from such state of affairs.

In accordance with Ophuls' pathologic studies, in our cases, *progressive endarteritis,* with occlusion or rupture of a terminal vessel, is a systemic fault responsible for the causation and continuance of 16 per cent of peptic, particularly gastric, ulcers. One can prognose the course and outcome of such ulcers with about the same degree of accuracy as he is able to prognose similar lesions in the kidney, heart muscle or the aorta. Treatment of the local, visceral lesion exerts little effect upon the underlying, etiologic fault, unless the subject simultaneously receives management directed toward the major and primary disturbance. With exception of the luetic patients, ulcer subjects forming this group are above 45 years of age. Progressive sclerosis may be accelerated strikingly in the presence of infection or by endocrine, psychic, toxic or environmental handicap.

In approximately 15 per cent of my cases, ulcer inception and continuance appeared to be definitely related to a form of *visceral angiospasm,* similar in mechanism to that present in Raynaud's disease. These patients are commonly of the florid, high-strung, emotional type (many exhibited well developed evidences of stigmata of the spasmophilic diathesis); their life histories had been replete with unusually striking visceral upsets; from very infancy they were dyspeptic. In this type of patient, angiospasm may be so intense and long maintained in a section of the visceral wall as practically to amount to vascular occlusion, with consequent mucosal damage and ulcer foundation. If taken early, this group of patients responds to any form of therapy which will restore and preserve psychic balance and equalize visceral blood distribution by preventing local or general angiospasm. Physicans, generally, have paid too little attention to this group. The folly of dosing them with pills and powders, arranging diets or of torturing them by gastric lavage is apparent. The physician of strong personality who secures and keeps their confidence, in other words, tranquilizes and stabilizes them, is of far greater worth than he who depends upon medicinal remedies. It is in this very group that sanitarium routine, the positive manner and the unique manuevers of the cultist, the soft hands and the soothing, ecclesiastic utterances of the christian (?.. scientist (?), the vari-colored and vari-temperatured lights or the vibratory seances of the electro-therapist proves most useful. The individual response is so capricious that the modes of management which are responsible for instituting psychic balance are myriad and often bizarre. Consequently, one need not be chagrined if such an ulcer patient fails to respond to accepted and carefully carried out clinical care, gradually lapses toward the untutored cultist and there, amid spine jolts, vibrators, calisthenics, curious menus, and colored glow-lights reposes his confidence, finds tranquility and loses his dyspeptic torture. One should recognize the type of patient before such finds it necessary to drift to therapeutic "hocus pocus", at the hands of misguided fanatics and charletans, and should seek the possible causes for emotional and neurologic instability in the patient's mental state, his work, home life, financial conditions, his physical handicaps, etc., and should attempt to adjust him to rationality, by intelligent interpretation, rather than to let such be brought about by dangerously ignorant cultists. It is worthy of comment that those of our profession, who, from the patient's standpoint, most successfully treat peptic ulcer, whether such physicians be internists or surgeons, are those whose positivism, personality, reputation or surroundings excite the greatest confidence or awe. In such event, prognosis not rarely depends on personality; the regimen of management for the gastric or duodenal defect is not particularly material, provided a correct appraisal of the ulcer damage has been made and the regimen is not foolish or dangerous.

Since the foregoing observations are warranted by the study made of my material, it is evident that the patient whom we have "tagged" at the time when ulcer was diagnosed, has usually traveled a considerable route of disability before his visceral ailment is recognizable, clinically. This pre-ulcer disability vitally influences ulcer prognosis. The earliest manifestation of the gastric or duodenal fault may be precipitated by a wide variety of agents or local or systemic accidents.

Not quite one per cent of our patients experienced extra-ordinary intra-visceral *traumata* in conjunction with their primary ulcer symptoms or signs. Such definitely recognizable *acute ulcers* uniformly healed with no more delay than accompanies operative procedures upon duodenum or stomach, except in those instances where traumata resulted in rupture of the viscera or adjacent organs were involved. The mortality in acute perforation was 27 per-

cent; the digestive mortality much higher in those who escaped fatal issue. Apart from those ulcers, acute from traumatic causes, the type of acute ulcer, as commonly diagnosed clinically, pathologically is quite a superficial and evanescent lesion: it resembles the herpetic lesions about the lips in lobar pneumonia—and, frequently, seems to be similarly excited In my patients, barely 7 per cent of these acute ulcers were accompanied by gross hemorrhage. Of this group the immediate mortality was 3½ per cent—a figure, probably lower than is commonly reported, because, with us, massive bleeding is always an indication for immediate transfusion of large volumes of whole blood by the Kimpton-Brown-Percy method. One-sixth of 1 per cent of the acute ulcers perforated promptly at their first clinical manifestation. The great majority of so-called "acute" ulcers ("mucous erosions") go to spontaneous cure. Frequently, ulcers of this type can only be suspected to be present, in the absence of gross hemorrhage, perforative signs or roentgen evidence. It is quite likely that only few of what are so commonly diagnosed as being "acute" ulcers actually exist; the symptoms on which diagnosis of this type of ulcer is made rarely bare close scrutiny; similar symptoms are quite commonly excited by numerous extra gastric or duodenal affections.

The prognosis with respect *bleeding ulcers* must always be regarded as grave, not necessarily immediately, but with regard the future. Particularly is this the case when several hemorrhages occur within a brief period of each other. Our observations made at the operating table or post mortem demonstrate that 63.2 per cent of ulcers which have manifested gross hemorrhage, exhibit signs of perforation: complete, impending or protected. Prognostically, then, we may well establish the dictum that massive hemorrhage (when not "vicarious") clinically spells some form of perforation, either immediately or in the future. A correllary to this is, that ulcers complicated by hæmatemesis or by melena are immediately or potentially surgical problems. Individual exceptions to these statements come to the minds of all of us, but study of a large group of similarly affected warrants the general conclusion.

One of the most serious concommittants of peptic ulcer healing lies in the *development of scar tissue,* capable of producing obstruction, deformity or fixation to viscera adjacent to the stomach or the duodenum. My figures with respect to how frequently such complication occurs are not yet complete, but the material thus far tabulated, indicates that 31.5 per cent of all peptic ulcers uninterfered with surgically, exhibiting positive clinical and roentgen evidences of their existence over an average period of 14 years, accumulated sufficient scar to cause duodenal or pyloric stenosis, 1.3 per cent cardiac obstruction and 2.7 per cent same type of so-called "hour-glass" deformity. These figures are lower than those usually given by gastroenterologists, particularly with respect pyloric obstruction, because our material deals with actually demonstrated, obstructive lesions and not with local spasms of short or long duration—which spasms furnish fully three-fourths of the average non-surgical diagnosis of obstructing gastric or duodenal lesions. Unless of *luetic* origin, dense scar accumulation, whether in the stomach or the duodenal wall, prognostically means surgical intervention. I am quite familiar with the literature claiming cure by alkali therapy, gastric lavage and diet of as high as 90 per cent of such lesions. The carelessness and absurdity of claiming to relieve patients of their massive scar accumulations can be appreciated only by those familiar with the operative and pathologic findings of these "cured" obstructive lesions when the patients finally come to laporotomy or to autopsy.

To patients, much concern is prevalent regarding wehther or not their *ulcers will ever terminate as cancers.* Prognostically, the roentgenologist has enabled us to give something of fairly definite value in answer to this query. The roentgen proof that an ulcer lies in the duodenum enables us to say that the probability of malignancy is very slight. Less than 0.8 per cent of duodenal ulcers terminate as cancers. These lesions are commonly located so as to invade the pylorus or are near the popilla of Vater,

The relationship of gastric ulcer to gastric cancer is still unsatisfactorily demonstrated. This uncertainty causes grave concern, because at present, no one can say to any patient that his gastric ulcer will heal benignly or will progress to malignancy. We believe that approximately 4 per cent of all gastric ulcers located at o rnear the cardia or in the pyloric sixth of the stomach eventually exhibit definite malignant histopathology or clinical course. Prognostically, a gastric ulcer which has been *intermittantly* active in an adult for years and which becomes *constantly* bothersome is to be regarded with suspicion. Particularly, when in the carefully prepared stool specimen, occult blood is *constantly* present. If, to these two observations, one has the *roentgen proof* of extensive scar, or a crater type ulcer of a diameter in excess of two cm, the ulcer should be regarded as

malignant and promptly extirpated. Histologic studies show that more than six out of ten such ulcers exhibit atypic cell proliferation at their edges.

DISCUSSION

DR. FREDERICK G. BUESSER, Detroit: In the time allotted for consideration of these papers we can touch only the high spots.

If a man gets relief from food and from the alkalies, that is the most definite evidence of gastric ulcer. The X-ray evidence is of great value. Laboratory evidence is of great value. It means that one must avail himself of all three of these methods in certain types of cases.

It seems to me an important thing in gastric work that an individual have some intelligent understanding of the functional capacity of the stomach, just as one wants the functional capacity of the kidney in types of nephritis.

Intensive classification certainly gives a better understanding of the functional power of the stomach. If we can only remember that the job of the laboratory is to assess the functional value of the gastric analysis instead of trying to name the disease by the laboratory finding. From a laboratory standpoint, the most valuable of the information that comes to me is the microscopical study of the gastric contents. In other words, the appearance of the pus cells and the appearance of the blood and of the gastric debris certainly gives some definite inside knowledge of the pathology that might be present.

A word about Dr. Vreeland's paper about diagnosing pyloric obstruction. When one finds Boas-Oppler bacilli one finds lactic acid. It is a clean-cut case. There is no question of that.

The question comes up as to the degree of pyloric obstruction. The question comes up as to whether or not it is advisable to classify as beginning obstruction those cases which show a residue. I think that is one important thing which should be borne in mind, that is, that every individual has a stomach which from its secretory side is peculiar to that individual.

When we talk about a seven-hour retention we must bear this in mind, that an eight hour stomach may be empty in four hours and still show some evidence of pyloric pathology.

An atomic type of stomach can be best determined by X-ray examination. I think an X-ray examination is a most important thing in determining whether that inlividual's seven-hour retention is of as much significance as a seven-hour retention of another type of stomach.

Regarding the question of belladonna as an antispasmodic in these types of lesion that might be regarded as organic or might be regarded as reflexes from some other condition. Belladonna, in our hands in the work we did on duodenal drainage, in which there was no evidence of pyloric ulcer, when given large doses of belladonna, many of them showed absolutely no relaxttion of spasm. The cases that were given belladonna to the highest point of tolerance showed some inclination at times to get enough pyloric relaxation to let the food go through.

I don't think it is good therapy to treat a man at the age of forty for pyloric obstruction by medical means. I think that the advisable viewpoint or the logical viewpoint to take beyond the age of forty or at the age of forty with signs of pyloric obstruction is that the individual should be treated as a potential carcinoma and operative interference immediately advised.

Unfortunately, no new methods have been introduced in the last several years that would be more helpful in diagnosing certain types.

I would like to ask Dr. Vreeland if he found this condition of alkalosis in cases of pernicious anemia or if he found it in such cases as showed dilation of the stomach. Many years ago Schmidt called attention to the fact that individuals with dilated stomachs were prone to develop tetany. It would be an interesting thing for me to know if any cases with a true pernicious anemia showed evidence of alkalosis.

Regarding Dr. Smithies' paper, which is very timely and characteristic of the gentleman, it is a wonderful resume of the views, which probably differ from the views that have been accepted by many men as to the treatment of peptic ulcer. I, with Dr. Smithies, share this view.

Since the flu epidemic of 1917 and '18, individuals with gastric symptoms, even under the Sippy treatment, have shown an inclination to develop symptoms of ulcer.

The question of focal infection is always interesting. It has been my experience that focal infections are no more common in individuals with peptic ulcer than in individuals without peptic ulcer. For the good of the patient, all foci of infection should be removed. I think under certain circumstances, in other words, running hand in hand with sinus infection and tonsilar infection, if the type of organism can be isolated and if an autogenous vaccine can be made and if, upon administration of the vaccine, a sinus lights up or the throat feels more sore, probably we have something that is going to be of value in the treatment of the ulcer.

I have also noted with the Sippy treatment that certain types of individuals that for many years had shown no evidence of anything pathological had, under Sippy's treatment, developed what Sippy may call a focus. We have seen too many cases of albumin with casts with evidence of retention which we thought we might attribute to the Sippy regime.

After all, it is not only the treatment of the localized condition with which one is contending, but a general upbuilding of the individual in order that an ulcer diathesis, if we may call it that, may be eliminated. How to eliminate that, I do not know.

DR. A. W. CRANE, Kalamazoo: I would be glad to pay my respects to Dr. Smithies, whom I think has given us one of the best resumes of the subject that I have heard. Our own experience in this regard coincides with the doctor's almost without exception. Especially his remark about the absence of ulcer. Some years ago I published a resume of a thousand stomach cases in which I made the statement that we could find no gastric or duodenal ulcer in any of the cases that showed those signs. That is merely a personal experience.

In regard to gastric retention as a sign of obstruction, I think it is well to emphasize that prolonged gastric retention cannot always be relied upon as a sign of obstruction at the pylorus.

In one case which I published in detail, the patient had a gastric residue at the end of three days. There was a massive gastric residue and yet the X-ray examination shows clearly that not only was the pylorus open but somewhat dilated. We could find absolutely no cause for that retention in the stomach or in the upper duodenum.

The case was later studied at the Mayo Clinic and Dr. William Mayo operated upon the case

without knowing the cause of the gastric retention. There was found a carcinoma of the duodenum. And yet that was not obstructed. It was due to the characteristic lesion and not to the fact of any obstruction that caused this retention within the stomach. The general law may be stated that certain lesions below the pylorus may cause prolonged gastric retention.

I have listened to Dr. Smithies' paper with very great interest because I regard him as one of the greatest authorities on the stomach, gastric ulcer and cancer, as you all know. I also like to take issue with Dr. Smithies because that always results in an especially brilliant comeback in his final summing up.

The doctor has given a really noble generalization regarding ulcer, that it is not a local manifestation, but an outcome of some general condition within the system. It is not to be looked upon as merely a local manifestation any more than a plug in the aorta or a varicose ulcer, and so on.

In listening to his paper, I fail to find out what general disease is accountable for gastric ulcer. And when I recall the divers causes, which I could not undertake to give now offhand, divers causes of gastric and duodenal ulcers, I also fail to see how it would be possible to formulate or understand any general condition which could be said to be accountable for gastric and duodenal ulcers, either one.

Again as to peptic ulcers. If we were to consider that the associated pathology was accountable for it and could hold first the appendix accountable and then the gall bladder and then some gynecological condition in the female, and so on through the whole range of pathology, we would destroy the force of saying that gastric ulcer is the association with disease. It is no disease itself, although it may have a bearing upon a gastric or duodenal ulcer.

A great deal of stress has been placed upon the influence of the appendix in the production of healing of an ulcer. In our work I have failed to see a single ulcer heal as a result of the removal of the appendix. There is no question but what gastric symptoms will disappear where due to a violent spasm. It will disappear if the reflex focus is removed. I am not able to assert that I could prove that but I say my personal opinion is that the ulcer will not heal from the removal of the appendix. But I do believe that the gastric or duodenal ulcer will heal if the parts are given sufficient rest if, what is all important, the gastric juice is no longer acid.

I think Dr. Smithies will have to admit that when the gastric juice is rendered neutral or slightly alkaline and there is sufficient rest that, in the absence of anything to hold the ulcer open, healing will occur. That is the most significant thing in the prognosis of ulcer. To my mind the prognosis of ulcer is the prognosis of the gastric secretion. In spite of all the physiologists have told us about pain in the stomach due to distention and the fact that highly acid juices will not produce pain, the fact remains that the patients are relieved of pain as soon as the gastric secretions are neutralized.

I think the statistics Dr. Smithies has offered us are overwhelming in their magnitude. There can be no question that a very large number of cases are relieved, some permanently and some temporarily, by rest and alkalinization of the gastric juice. How to explain, I do not know.

If it is not to be considered as a local trouble, then why should we consider that a surgical operation is a cure for ulcer? Why, when a surgeon excises an ulcer and closes the wound and the patient recovers from the surgical operation, why should he be cured if it is a general condition and not local? As a matter of fact, the patient is not cured. In the work which I have had in personal conversation with Dr. Will Mayo it is his statement that a gastro-enterostomy does not cure duodenal ulcer, and although the case may remain symptom-free the case will give under X-ray examination the same deformity as before. There will be even visible blood in the stool and the patient may die from hemorrhage, although symptom-free and having been operated on for duodenal ulcer. The cure is by no means so easy.

In regard to the multiple pathology, we can draw the conclusion because we have certain conditions present at the same time that therefore one is the cause and the other the effect. We find multiple pathology, as a rule. If the patient is examined with sufficient care, there will be perhaps more or less separate conditions found. It may have some causative relation, but that remains to be proved.

Now I will listen to the brilliant outburst whereby Dr. Smithies will establish the truth and reasonableness of his assertions.

DR. E. L. EGGLETON, Battle Creek: In summing up the results of such a meeting as this, it seems to me certain things are quite apparent. One of those is that a meeting of medical men that does not have a symposium on peptic ulcer is somewhat of a failure. I know of nothing that can start a discussion or that can maintain the interest of an audience so thoroughly as the discussion of this problem which has been before us for a great many years.

Today I think we are also quite well satisfied, from what we have learned, that the diagnosis of ulcer can be quite accurately made. We have plenty of procedure at our hands for arriving at a positive diagnosis, it seems to me, in the great majority of cases of peptic ulcer, whether it be duodenal or whether it be gastric. It is true that a great many cases are insufficiently studied and, as a result, unfortunately treated. But there is no occasion for such conditions today.

Having arrived at a positive diagnosis, what are we to do? I think Dr. Smithies, believing we were a peace loving people, has come over here and has very rudely assailed our ideals. I have been in Grand Rapids before and I have learned from the surgeons that there is a cure for gastric and duodenal ulcer. We know that to be the case. We have heard, from other sources, that there is a possibility of curing surgically something over 84 per cent of all cases submitted to operation. We know that over 90 per cent, according to good statistics, can be cured. I don't know what has happened to Dr. Smithies all these years. He apparently has not been following the literature.

I think we as physicians should also be very agreeable to the ulcer patient. I know of no patient who has so much confidenc in his physician as an ulcer patient. Dr. Smithies says in certain cases he has known that the patient has returned eight times for treatment and still has confidence.

Now, this problem may be somewhat discouraging and still, according to Dr. Smithies' own statements, they don't die. He says some of them have been afflicted with this trouble for forty-eight years before coming to him; that the average was twenty years.

As a sufferer of this trouble myself, I obtain considerable relief after hearing such statements as that. I think possibly I run a good risk of getting through a few years longer. What are we going to do? Now, it seems to me that Dr. Smithies has almost presented a program of therapeutic nihilism. Are we going to take out the man's

tonsils, gall bladder and probably prostate and say, —"You are all right now, you have been relieved from the general disease,"—and neglect his ulcer? We have to do something to the ulcer.

I am not yet satisfied that a course of treatment which is carefully mapped out in consideration of what may be wrong with the man generally and which is continued in a careful way for a sufficient length of time is not of value to that patient. I am sure it is. It would take a great deal of discussion to convince me such was not the case.

That is not saying I have been able to cure 90 per cent of my cases or even 60 per cent of my cases. If we only provide permanent relief, leaving out the matter of cure, if a man is permanently relieved of symptoms and if he can follow a normal program in life, I don't care whether he is cured so long as he has relief of symptoms. If a man can lead a perfectly comfortable life and follow his ordinary vocation without trouble, the doctor has done something for his patient. Therefore, I am not entirely in accord with Dr. Smithies in his prognosis. It is true we see a lot of uncured cases and they may be symptomless. At the same time, if symptomless, it seems to me, that the man suffering from duodenal or gastric ulcer is almost as fortunate as the man who has no trouble whatever.

DR. GEORGE McKEAN, Detroit: I will give the history of a doctor friend of mine. He has gone through, in the last fifteen years, those features of the ulcer picture. I have watched him with interest as I have watched the development of the ulcer problem in medicine in the last thirty years.

We used to hear ulcer called recurrent dyspepsia and then we got our warning that we must not allow recurrent dyspepsia to go on because carcinoma was in the man's stomach as well as in the air. And then we found a great many of these carcinomas were really ulcer. And then we got to calling everything that was hyperacidity ulcer and we are publishing statistics that have hyperacidity cases probably mixed up with the ulcer just as this doctor had, and then we got to the gastro-enterostomy stage and then we had the appendices out. It is said drainage is the whole story. And now Dr. Smithies wakes us up with a story altogether different.

This is the doctor's story that I have in mind now. He had a recurrent dyspepsia and was treated for it. He was treated for nervous dyspepsia because he is a neurotic. He then had his appendix out and he was much better for a little while of his stomach condition. He relapsed. And after a year or two or three, he was shown by X-ray to have peptic ulcer. He recovered, as most of them do at his time of life. They go along and live under proper regime for a time.

He was relieved of his symptoms and was perfectly well, and the war came along and he went to the war. Over there, under the stress of things, in about a year his ulcer symptoms recurred and he was sent home with a dispute between alcoholic gastritis and ulcer of the stomach. He got out of the army on ulcer of the stomach, however. He recovered for quite a time and was at his work regularly and faithfully. He was a mighty fine fellow and didn't have alcoholic gastritis at all.

Within the last year he has been in the hands of one of the world-wide reputation men under this celebrated regime. Now we see him every two hours with his powder, taking it still, and he is wonderfully relieved of his symptoms. He is not well of his ulcer. He has one. He is a surgeon himself and should be operated, of course, but that is different. There is no question about his being an operative case.

His case illustrates the history of the ulcer story.

After all, doesn't it simmer itself down to common sense handling of this patient with the ulcer? Then you must handle the man. If he happens to have the ulcer, of course you have to handle the ulcer, and if he has a systemic infection you must get rid of it. If you don't, your relief of the symptoms doesn't do any good; but if you really get at the bottom of his trouble, if it can be done, then you will get somewhere in the handling of your ulcer.

Most any of us can relieve ulcer symptoms. There is no question about that. There are half a dozen different symptoms. But the recurrent ulcer in the man getting along to forty years old, I don't think, gentlemen, it belongs to the doctors.

DR. W. H. ENDERS, Jackson: I was very much impressed within the last few years with the return of a great many of my ulcer patients. Also, I think that about 50 per cent, or practically an equal number of patients who have been operated on for the cure of ulcer are coming back.

It seems to me that we are drawing too close a line between pathological cure and symptomatic cure. I don't care so much if a patient does have scars left, so long as he is feeling good. To my mind, a cure means a feeling of well being.

I am very much surprised at the attitude of my friend, Dr. Smithies, and the new thing he is trying to make us believe, and also the fact that he has gone so radically over to the side of the surgeon. He used not to be that way. And the others, Dr. Eggleston, have so very well voiced my objections to what he has said that I am going to let that stand. I would like to hear his defense of his position.

DR. WOOD, Detroit: What method does he use for controlling vomiting? The second question is whether he advocates that it is possible to make a definite clinical diagnosis or whether it is necessary to go through elaborate chemical tests of the gastric contents and the urine.

DR. C. EMERSON VREELAND (Closing): I haven't very much to say now as I heard no refutation of my assertion that symptoms from functional disturbance or spasms at the pylorus and inflammatory swelling could not be distinguished from cicatrix, and I still hold that ten to fourteen days of actual control will determine.

Dr. Buesser thinks fourteen days is too long to wait in the case of an obstruction that might be malignant. But I doubt if that is any more of a risk than to go down with the stomach tube.

I think perhaps the standpoint of the men that believed in the corrosion theory as part of the reason why an ulcer does not heal have been misquoted because every one of them, to my knowledge, asserts for the underlying cause and thinks perhaps it is a systemic disease in which the gall bladder and appendix may be involved at the same time.

I have never heard yet why the appendix or gall bladder should be removed if there is a possible cause, for they sometimes have the gastric ulcer. In other words, the doctor of whom Dr. McKean spoke has a very severe sinus infection that the nose and throat men have not cleared up yet.

It seems to me, like any local manifestation, whether it is a long rest or ten hours sleep a night, we should all use all the methods we can and at the same time remove the focal infections.

Then, again, I think that most of us lose track of one important thing in all of our bodies, and that is that nature endows us with the peculiar tendency to heal any lesion that we have. Take, for example, an ulcer in the lung, we should not get a tuberculosis well with an ulcer in the lung if we sent him on a foot race and in smoky air. They have to have a rest and good food and a long time to heal them. It may be six months or six years before they entirely

heal. The same thing is true if you attack an ulcer, which is the local manifestation of a disease.

We have to have a local and a general management. The local management does not have to be surgery in as many cases as we have had heretofore. The men who treat ulcer locally by the alkalinization method have recurrences, also. It may be that the individual, in spite of our management, persists in staying out late nights or smoking ten cigars, or abusing himself with coffee, or playing on the stock market, or something to reduce his ability, and does not let the ulcer heal. Whether it is in the stomach or in the lung or in the nose, I can't see why an ulcer in the stomach should be an exception to the general healing.

DR. J. B. YOUMANS (Closing): I had been looking for a case of true achylia for about a year. I have not found one. In one case, which I did not report, there was no free hydrochloric acid in the stomach contents, but there was a perfectly good percentage of combined acid.

The doctor also wanted to know whether alkalosis has a tendency to occur in the dilated stomach. It does. It is well known that gastric tetany occurs in cases of obstruction, practically always associated with dilatation and generally with increased secretion.

Dr. Woods wishes to know what method we employ to control vomiting. In these cases which we were studying, we did not care particularly about controlling the vomiting for a day or so. After we had done studying them, rest and restriction of food generally suffices in the milder cases. In the more severe cases, surgical intervention may be necessary. That is, when the cases show signs of tetany and there is possibility of becoming seriously ill, surgery may be indicated. In that case, he is probably put in a better position for operating by treatment with the intravenous injection. He may be put in better condition. It has not yet had the trial of time. That may be the reason why previously operation has not been successful.

The tests for alkalosis are of many kinds. The best, I dare say, would be the concentration of blood and determination of carbon dioxide in the whole blood. But those are involved procedures and are not applicable to general clinical use. Ordinarily the determination of the CO_2 capacity without whole blood is done. That again is practically restricted to use in hospitals. However, you can, by means of determining the alveolar CO_2 function in the aleolar air, generally tell the alkalosis of this type, and that may be used in the home or elsewhere. That is very handy.

DR. FRANK R. SMITHIES (Closing): I was not going to keep this group of men any longer. Dr. Crane has yanked me from a comfortable position in which I was happily ensconced and so I am on my feet as a result of this powerful "Crane."

When I was at Ann Arbor, one of the things that impressed me most significantly and for the longest time was a certain group of mottoes or wise sayings which were painted around the laboratory wall. The regents wanted to gild the place, but they said that was not the kind of place that should have gilt on the walls, and pink furniture. We persuaded them to spend the money on black paint. One wise saying stuck with me all these years. It went, *"Primum non Nocere."*

That is my position with regard to ulcer prognosis.

When I was a student at Ann Arbor, at that time typhoid fever was supposed to be a local sepsis of the large bowel and not a bacteremia. Now, when so eminent a scientist as Professor Novy, at the height of his career, could regard typhoid fever as a local intestinal fault, it seems to me that there are certain reasons for the facts I have presented to you this afternoon. They are not my opinions. They are my facts from people with ulcer that have been down the line, and should warrant your consideration.

So eminent a man as Osler, in the last edition of his work, stated that all our ulcer statistics should be thrown into the scrap heap because we had been talking about ulcer and treating ulcer and talking about the histology of ulcer when in many cases we had no ulcer whatever with which to deal.

Now, that is not an easy position for people to come to and yet I think my friend, Dr. Vreeland and Dr. Crane, himself, have proved certain things in a direct way which I tried to emphasize. Who of them? Will Dr. Crane himself? If I show up with an ulcer, will he write a ticket, "gastric ulcer" on it and say, what will become of me? That is the test.

I have seen as many actually proved ulcers as any man in this room.

A few years ago what were we doing with syphilis? We did not have salvarsan. What were we doing with nephritis? Giving medicine which acted on the kidney. We were altogether at a loss as to what was happen systematically. What were we doing with diabetes in the last ten years, especially in the last two or three years?

As I look around this afternoon, I realize that I am getting to be an old man. But I have a very great confidence in the future solution of some of these problems when I listen to the excellent papers read by the younger men. I have no fear about the ulcer problem clearing up if we keep a bunch of younger men at work as they have shown they can work.

I was not talking about the treatment of gastric or duodenal ulcer. I was talking about the prognosis. The only time the treatment was brought in was to emphasize how unsatisfactory treatment had been during the past seven years. There is more discussion today about the treatment of ulcer than at the time of the first description of ulcer, which of itself proves that we are in a most unsatisfactory state of mind with most unsatisfactory results to our patients clinically.

Now, of course, I can't keep up with the literature the way they can at Battle Creek. I have a fair reading knowledge. I would like to ask both Dr. Eggleston and Dr. Crane—where are those statistics quoting cures? I can sit down and say that I cure 90 per cent of gastric obstruction; but if I say that, because I am of the age of Dr. Crane and some of the others, they will challenge me at once and say, "Show me; show me your records show me your list of cases. Bring out your cases which have actually been cured."

Now, if Sippy cures 90 per cent of all the ulcers that come under his routine, of all these cases, 90 per cent are cured, and I say so many who have been under this treatment and you say so many who have been treated, my God, the whole country must be full of ulcers. Ninety per cent cured of what we see represents only ten per cent. Where are we? A million diabetic in the country are but a corporal's guard compared to them.

The things I have tried to emphasize this afternoon in calling attention to the prognosis were really put as they were put to try to clear the atmosphere of a lot of this loose talking and thinking about gastric and duodenal ulcer.

I thank Dr. Buesser very much and I envy him very much for giving us that term, ulcer diathesis. It is a comprehensive term which may be used until we know something about it, just as spasmophilic diathesis was used long before we knew about blood examination and the like. He has what we might call an ulcer diathesis accentuated by a great many "getatable" facts.

Soon we will get to a place where we can put our feet on the ground.

IODIZED SALT

Report of the Committee of the Pediatric Section, Michigan State Medical Society.

EDITORIAL NOTE:—*The following minutes and extracts of correspondence incorporated in this report set forth in explanatory detail the work that has been done by the Advisory Committee of our Pediatrics Section in accomplishing its purpose of bringing about the preparation of an iodized salt that would be a safe and efficient prophylactic agent for the prevention of goitre. The tremendous amount of work that was done, the many investigations that were made, the numerous conferences that were held, the securing of the co-operation of salt manufacturers and the success of the entire undertaking is apparent when one completes the reading of this report.*

March 14, 1924.

Dr. F. C. Warnshuis, Sec'y.,
Michigan State Medical Society,
4th Floor, Powers Building,
Grand Rapids, Michigan.

Dear Doctor Warnshuis:

I hardly know how to give you the information concerning our goitre work in a condensed form and still have you absolutely familiar with every step we have taken. Accordingly, I have had made a copy of all correspondence of the minutes of our committee meetings held at various places and of the outline for a goitre lecture to be given by physicians throughout the state and am sending it to you for your use in preparing information you wish to give to the members of the Society through the columns of the State Journal.

In this way you will have first hand information. A word of explanation about the outline and information that may be of help in the preparation of a popular lecture on goitre and its prevention may be useful to you. This outline contains considerable material that would not be given in a public lecture. We have included this information because we have felt that it may be of general help to the lecturers. If a man is well grounded in all of the facts concerning a subject he is talking about, we feel that he will be able to give a better talk and would also be able, because of this knowledge, to answer questions that might arise in the minds of some of the members of the audience. On the other hand, the information contained in the outline is by no means exhaustive—it simply touches the high spots. The idea of the committee is to put before the lecturers a mass of definitely bounded material, beyond which they are requested not to go. In this way there will be a uniformity of speech on the goitre problem in all sections of our state. Accordingly, people of one county will not get a different idea of the subject than those in an adjoining county.

The University has agreed to furnish several sets of lantern slides illustrating the lecture, which will be sent on request to any of the men who are selected to talk on this subject.

The point I wish to make clear is this—that the lecture outline is in no way intended to curtail the individuality of the speaker. He may re-arrange the subject matter or do anything he wishes to with it. The outline simply suggests to him the bounds within which we feel the subject should be kept.

We have had the most wonderful co-operation in our work with everyone we have approached to date. The salt men are getting very anxious to push the matter and it has been with considerable persuasion that we have been able to hold the scheme in abeyance until we have, as a committee, fully discharged our duties. We had to get through with our conferences with the salt men and get their reaction before we could bring the matter before the Council or the Society in session for their o. k.

One salt company has gone so far as to have labels printed on which they placed a statement indicating that the amount of sodium iodide contained in the package was the amount recommended by the Michigan State Medical Society. They have also gone so far as to place advertising material with the Detroit papers to appear on Sunday, March 16th. I have tried very hard to get them to postpone this for another week at least, until we could hear from you with regard to the results of the referendum.

The salt is going to be put on the market whether we endorse it or not. There is no way of preventing that, and while we initiated the idea and, because of that, are responsible for the appearance of the iodized salt on the market, we may not be able to control a too hasty action on the part of the salt men. The secretary of the Salt Producers Association feels the same way that we do about the problem; namely, that we do not wish to antagonize anyone. We do wish to have everything we do done decently and in order.

Thanking you for your kind assistance and co-operation, I am

Very sincerely yours,
D. Murray Cowie.

PROCEEDINGS OF THE ADVISORY COMMITTEE OF THE PEDIATRIC SECTION OF THE MICHIGAN STATE MEDICAL SOCIETY

FOREWORD

The how and why of an Advisory Committee of the Pediatric Section of the Michigan State Medical Society: At the inauguration of the Pediatric Section at the annual session of the Michigan State Medical Society, held at Flint June, 1922, the Chairman, in an informal address, proposed "that the section appoint a Committee of five, together with the officers of the section, as members ex-officio, to be known as an Advisory Committee, whose duty it should be:

To formulate and offer to the profession of the state—a simple, standardized method of infant feeding; a method of procedure in the prevention of simple goitre; an outline for the care of the under-nourished and pre-tuberculous child; and also some suggestions for the care of the nervous and mentally deficient children."

This idea was augmented by the splendid paper presented by Dr. O. P. Kimball of Cleveland on the "Prevention of Simple Goitre," read at a symposium of thyroid diseases. During the informal luncheon following the morning session the advisability of such a committee and of the subjects which could be taken up were discussed. Dr. D. M. Cowie spoke at some length of his studies upon Goitre which he had carried on for several years and of his plans of combining Sodium Iodide with common table salt, thereby making iodine available in small amounts for all

people in the state. This practical solution of the problem impressed all members so favorably that Dr. G. L. Bliss of Kalamazoo sponsored a motion creating the Advisory Committee—to consist of five members from the section and the officers ex-officio, with Dr. Cowie as chairman. The other members appointed to the committee were: Doctors G. L. Bliss, Kalamazoo; F. J. Larned, Grand Rapids; D. J. Levy, Detroit; F. B. Miner, Flint. Ex-officio members, T. B. Cooley, Detroit, and Lafon Jones, Flint. The committee has functioned since that time and concentrated its studies upon the problem of state-wide Prevention of Simple Goitre.

The brief minutes of the Committee's proceedings are appended.

I.

The first meeting of the Advisory Committee of the Pediatric Section of the Michigan State Medical Society was held on January 24th, 1923, 2:30 p. m., in the Michigan Union, Ann Arbor.

The meeting was called to order by Chairman, Dr. D. M. Cowie. Dr. F. B. Miner was appointed secretary. Other members present: Doctors T. B. Cooley, D. J. Levy of Detroit, G. L. Bliss of Kalamazoo, and F. J. Larned of Grand Rapids.

A general discussion of the phases of child welfare work in which this committee could become interested, followed.

The following motion was made by Dr. Levy and supported by Dr. Bliss: That the Secretary prepare a questionnaire directed to the county secretaries requesting information on the functioning of the child welfare work carried out by the State Public Health Department, Red Cross, and other agencies in their respective communities, and also requesting suggestions in regard to improving the efficiency of the same or mitigating the alleged abuses arising from the same, and that the secretary is to submit the questionnaire to the members of the committee before it is sent out. After a free discussion the motion was carried.

Motion by Dr. Cooley and seconded by Dr. Larned that a copy of the foregoing motion and the questionnaire be forwarded to Dr. Olin, State Commissioner of Health, informing him that the purpose of this action is to aid his department in its important work and to remove, if any, causes of friction and misunderstanding arising from it. Carried.

It was decided casually to concentrate our energies and study upon the question of "Prevention of Simple Goitre."

Dr. Cowie presented an interesting paper on the possibilities of using a small amount of iodine in table salt.

The following questions were given to different members to present at the next meeting:

Dr. Cooley: "The Effect of Iodine on Hyperthyroidism."

Dr. Bliss: "The Iodine Content of the Drinking Waters, Soils and Vegetables of Michigan."

Dr. Larned: "The Incidence of Simple Goitre and the Deaths Resulting From Goitre in Michigan."

The afternoon meeting was adjourned until evening and the committee was tendered a dinner by Dr. Cowie, at which time Dr. William Hale of the Dow Chemical Company of Midland, Michigan, talked to us upon the possibilities of combining iodine with table-salt and of its being used throughout the state.

II.

The second meeting of the Advisory Pediatric Committee was held on September 5th, 1923, at the Michigan Union, Ann Arbor.

The meeting was called to order at 4 p. m. by Chairman Dr. Cowie. All members were present except Dr. Cooley. Minutes of last meeting were read and approved.

A summary of the questionnaire was read and discussed.

It was moved and carried that the following resolution should be presented to the House of Delegates at the coming annual convention of the Michigan State Medical Society at Grand Rapids:

Resolution: Child Welfare—

To the House of Delegates:

Gentlemen: The Advisory Committee of the Pediatric Section of the Michigan State Medical Society recommends that in all communities having health organizations efforts be made to have such organizations brought under the jurisdiction of the local health department and that the expense incurred be raised by funds met by general taxation, hoping this will result in the smaller communities being helped through the agency of the State Diagnostic Clinics as now carried on by the State Health Department and that in large cities the control of these clinics will come under the supervision of the city health officer.

The Committee recommends that the activities of such organizations consist of diagnosis, prophylaxis, and therapeusis and that where prophylactic and therapeutic measures are indicated such measures be carried out only in the case of indigent patients, all other patients being referred to their family physicians."

It was also moved and carried that the following resolution upon goitre prophylaxis be presented to the House of Delegates of the Michigan State Medical Society:

Resolution:

"The Advisory Committee of the Pediatric Section of the Michigan State Medical Society during the past year has had under consideration the adoption of some method of prophylaxis against goitre that will insure that all individuals in the state shall receive the normal amount of iodine."

Your Committee begs to report that it has made a careful investigation as to the safety of giving all individuals, including hyper-thyroid patients, and patients with toxic adenomata two milligrams of sodium iodine a week and has found a unanimity of opinion among those able to judge that this small amount of iodine is harmless.

Your Committee further begs to report that after a careful consideration of the various methods of giving sodium iodide it considers the use of iodized salt as the most practical. We propose tentatively the following plan—that all salt used for food, manufactured in the state or coming into the state, shall contain the proper percentage of iodine, which will be based upon the amount of salt consumed per capita. Possibly a smaller percentage than two milligrams per week, which would be about .3 of a milligram a day, would prevent the development of the majority of goitres.

Your Committee being desirous of carrying their investigations still further, begs your support in taking up this matter with the various salt industries of this state and in causing proper information concerning goitre and its prevention, getting to the general public through the press, the results of our investigation to be reported to you for final action.

Meeting adjourned for dinner, at which an informal conference with Mr. Clyde Holmes was held. Mr. Holmes proposed an educational campaign through the press and a conference with the salt manufacturers to ascertain *their reaction to the proposition and secure their co-operation.*

Report of meeting with House of Delegates at the annual convention of the Michigan State Medical Society, held in Grand Rapids.

Dr. Cowie presented both resolutions which were referred to the business committee.

The next day the business committee reported

favorable upon the goitre prophylaxis resolution and it was adopted by the House of Delegates.

The resolution upon Child Welfare was not favorably recommended and was not adopted after considerable discussion. A copy of the discussion from the proceedings of the House of Delegates as published in the Michigan State Medical Journal is appended. (See files of the Journal).

At the business meeting of the Pediatric Section, Dr. Larned was elected president, and Dr. Bliss, secretary. The Advisory Committee was re-elected.

F. B. Miner, Secretary.

Dr. Cady sent in his report stating that he had written to various men about the effect of Sodium Iodide on hyperthyroidism. There was a uniformity of opinion that no harm would result from the small quantities we proposed to use. "Dr. David Marine says positively the amount we propose to use can do no harm."

Dr. Bliss presented the following carefully detailed report:

THE IODINE CONTENT OF DRINKING WATER, SOILS AND VEGETABLES IN MICHIGAN

I

Reports from the Michigan Apricultural College state that repeated examinations of large quantities of water (100 gallon lots) have failed to find even a trace of iodine in Michigan water.

II

For soils, we are unable to find any record of analysis of the soils having been made for the presence of iodine, in any of the central states.

III

Vegetation of Michigan—Reports from the Ohio Agricultural Experiment Station upon the examination of vegetation from the various states of the

(3) Among the garden vegetables and root crops Union is presented in the folowing summary, Michi- contained even so much.

gan vegetation included.

This summary shows that in order of increasing abundance of iodine in the several groups, mentioning first the one in which iodine is most rarely found, these groups would rate in the following order: (1) Nuts, (2) Spices, condiments and stimulants, (3) Fruits, (4) Cereals, (5) Hays, silage and forage crops, (6) Garden vegetables and root crops, (7) Leguminous seeds, (8) Animal products and (9) Manufactured foods, and milling and manufactory by-products.

IV

Among the animal products the only one containing iodine in more than traces was beef and hoof, from swine, a sample prepared in the course of a complete chemical accounting for the bodies of some experimental subjects. No iodine was found in 18 samples each of cow's milk, urine and feces, but traces were found in butter, eggs, and in several kinds (but no means in all samples examined) of meat, fish and crustacea.

CLASSES OF FOODS

(1) Among the cereals, iodine was found as an uncommon constituent; usually in traces only, and without apparent relation to the methods of fertilization and treatment.

(2) None of the fruits contained more than the smallest recognizable traces of iodine, and very few beets rather commonly contained traces of iodine, and in one case a large amount. Two out of three samples of cucumber contained iodine; also one out of three samples of celery. Iodine was found in single samples of endive, kohl rabi and lettuce. Among onions five samples out of 15 contained iodine; parsnips, two out of six. Six samples of potatoes out of 21 contained iodine; it was also found in spinach and in rhubarb. We found iodine in one sample of turnips out of 11, but none in tomatoes, pumpkin and squash.

(4) Of the hays, silage and forage crops about one sample in four contained iodine. Among leguminous seeds iodine was found in 11 samples out of 32; more commonly among beans, peas and cow peas than among soy beans.

(5) The manufactured food, and milling and manufactory by-products contained iodine in 13 samples out of 25; of those containing iodine 10 were made from cereals. The offal portions of the grains are richer in iodine than the more starchy parts.

(6) Agar agar and Irish moss were richer in iodine than any other products examined. They are the only marine plants included in this study.

(7) Nuts, spices, condiments and table salt are not important sources of iodine in the dietary; none at all being found in seven pounds of nuts and in 16 samples of table salt.

The more important sources of iodine in the human dietary then, are the garden vegetables, though some is also found in the cereal foods, and in several foods of animal origin, mostly of the sorts less commonly used.

Among the foods used by livestock the most important sources of iodine are the hay, silage and forage crops, and also the milling and manufactory by-products, comparatively little being found in the natural grain foods.

It is true, however, that in consideration of the smal proportion of the food samples which contained iodine; also the facts that even when present the iodine was usually found only in traces, and that there was not commonly a consistent character of the iodine content of foods from a given region, we conclude that we have no satisfactory basis for statements as to the general geographic distribution of iodine in the foodstuffs of the United States. The evidence seems much more to emphasize the rarity and the accidental nature of iodine as a food constituent.

Variations in the iodine content of the same grain crop from several plots in the same field are often comparatively prominent. None of the ordinary methods of fertilization, or other details of management of the soil have been found in any regular way, to affect the iodine content of field crops.

The results of the investigation direct us toward a study of factors other than the diet which affect the amount and condition of the iodine present in the thyroid, as promising results of greatest significance in relation to the cause of goitre.

SUMMARY

An exhaustive examination of the literature from State Agricultural Colleges and from Experimental Stations and from chemical laboratories show that the iodine found in the waters of Michigan is nil; that, for the soils of Michigan there has been no analysis made; for the vegetables of Michigan only the very slightest trace has been found; that the iodine content of foods grown in the goitrous regions appears not to be lower than in foods grown elsewhere, nor is a high iodine content characteristic of foods grown in goitrous regions.

Dr. Miner presented the following letter:

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY
WASHINGTON

July, 18, 1923.

Dr. Fred B. Miner,
Flint, Michigan.
Dear Doctor Miner:

Dr. C. F. Langworthy has requested that this Survey send you all information on iodine in natural waters throughout the United States especially in Michigan.

You have undoubtedly read the preliminary paper by Dr. J. P. McClendon, published in the Journal of the American Medical Association March 3, 1923, page 600, in which the occurrence of iodine in natural waters in the United States is discussed and is shown on a map. Dr. McClendon probably has more information in regard to the actual quantities of iodine in natural waters in the United States than has been collected by anyone else. It is not evident just why there should be no more iodine in natural waters along the Atlantic Coast than there is along the Pacific Coast. It seems probable that Dr. McClendon has been rather free smoothing his curves both for iodine in the water and for the incidence of goitre.

The quantities of iodine present in natural waters are so small that determinations of iodine have rarely been made except in analyses of brines and in analyses of mineral waters supposed to have some medicinal value. As a result of this condition the fact that iodine is not reported in an analysis of water is no indication that it would not have been found if a sufficient quantity of water had been taken for the analysis. It is to be hoped that Dr. McClendon's investigations may possibly bring out some relation between the quantity of chloride and the quantity of iodine in natural waters. It has generally been found that iodine can be detected in waters containing 1,000 parts per million of chloride without using an excessive quantities of water for the test.

Except as it may have been done by Dr. Clendon I have no knowledge of any search of analysis of waters throughout the United States to select those in which iodine has been determined.

Very truly yours,

PHILIP S. SMITH,
Acting Director.

The Third Meeting of the Advisory Pediatric Committee was held at the City Club, Jackson. Michigan, December 14th, 1923.

The meeting was called to order by Chairman Cowie. All members were present except Dr. Bliss of Kalamazoo. Guests present were Dr. William Hale of the Dow Chemical Company, Midland, Michigan, and Prof. Wm. D. Henderson of Ann Arbor, Michigan.

Dr. Cowie presented a report in detail of a meeting in Detroit with several of the Salt Manufacturers, at which meeting members Drs. Cowie and Levy were present.

Dr. William Hale of the Dow Chemical Works, Midland, presented a number of exhibits of salt mixed with different percentages of Sodium Iodide to be tested for the detection of taste of iodine and for the color of the salt. It was found that 1/100% was barely detectable in taste and had no change in color. 1/200% could not be detected by taste.

A rather lengthy discussion followed as to the methods of combining iodine with salt, and he was to ascertain and report at the next meeting if Sodium Iodide in these small percentages would have any effect upon foods, particularly butter, meats and starchy foods, and if there would be any deleterious effects upon hides in the tanning process.

Professor Henderson then presented the scope of the work of the Joint Committee on Public Health Education, stating that last year 196 lectures were given, reaching about 26,000 people, and that he experienced difficulty in securing medical lectures in different parts of the State, and that the majority of requests from organizations were for talks upon the subject of goitre. He proposed dividing the State into districts and selecting physicians interested in the prevention of goitre in these respective districts. Dr. Cowie presented a tentative outline and offered to prepare a general outline of a lecture covering the history of thyroid gland diseases, goitre surveys, the methods of combating the development of the disease known as "Simple Goitre," and also stating the purpose of this committee and its recommendations.

It was also proposed to mail out a questionnaire to the members of the committee for the purpose of securing a number of nominations for lecturers in the different districts of the State.

A general discussion folowed as to the best way to control the proper amount of Sodium Iodide to be put into salt, whether by State law or by copyright. It was the consensus of opinion to do neither, but rather to create a demand through educational channels for an iodized salt and that we co-operate with the salt manufacturers in seeing that the right amount is used.

Meeting adjourned.

F. B. MINER,
Secretary.

The Fourth Meeting of the Advisory Pediatric Committee was a joint meeting with members of the Michigan Salt Producers Association at Hotel Tuller, Detroit, March 7th, 1924, at 10:00 A. M. Members present were: Chairman Cowie, Drs. Cooley, Levy and Miner. Members of the Michigan Salt Producers Association present were: Mr. Doremus, Secretary; Mr. O. W. Mulkey, Mr. J. L. C. Mulkey, Mulkey Salt Company, Detroit; Mr. Franklin Moore, Diamond Crystal Salt Co., St. Clair, Michigan; Mr. A. E. Snow, Mr. W. W. Thune, Inland Delray Salt Co., Detroit; Mr. J. I. Seelby, Michigan Salt Works, Marine City, Michigan.

The meeting was called to order by Mr. Doremus, who first read a letter from Mr. F. F. King of the Colonial Salt Company of Ohio stating that his company had for two years been considering the making of an iodized salt, but had not as yet found a method of combining the Sodium Iodide with the salt, nor were they as yet agreed upon the amount of Sodium Iodide to be used in a given amount of salt.

Dr. Cowie presented the aims and purposes of the Advisory Committee by giving a historical sketch of the study of thyroid diseases in various countries and at different periods of time so far back as the ancient Greeks before the birth of Christ, who found that the ash from burned sea sponges cured goitre. He also commented upon the work of Drs. Marine and Kimball of Ohio, and gave the astounding figures on the incidence of goitre in Michigan as recently compiled by Health Commissioner Dr. R. M. Olin from the survey of school children in four different counties.

Dr. Hale, Chemist at the Dow Chemical Company, exhibited several samples of salt containing different percentages of Sodium Iodide, showing that it was possible to combine salt with Sodium Iodide so that the taste was not detectable nor the color changed. He also stated that in the low percentages there would be no effect upon butter, in the cooking of meats and starchy foods unless some mineral acid is present, nor would there be any effect upon the curing of hides.

A general discussion then occurred with the Salt manufacturers as to the best methods of combining iodide with salt, and also the question of cost was considered.

Motion was made by Dr. Levy and seconded by Dr. Cooley that salt to be iodized should contain 1/100% or .7 of a grain of Sodium Iodide per pound of salt.

All the salt manufacturers demonstrated much interest in the proposed welfare work on Simple Goitre prophylaxis as outlined by the Advisory Committee, and expressed a willingness to co-operate with the committee in manufacturing such a product and at a very slight additional cost to the consumer.

Meeting adjourned.

F. B. MINER, M. D.
Secretary.

MINUTES OF THE COMMITTEE MEETING HELD AT DR. COOLEY'S OFFICE, 987 E. JEFFERSON ST., DETROIT, TUESDAY, DECEMBER 11, 1923, 10:00 A. M.

Those present were Dr. Cowie, Dr. Levy, Dr. Cooley, Mr. Henry Whiting, President Diamond Crystal Salt Co., St. Clair, Mich.; Mr. F. W. Moore and F. Moore of the Diamond Crystal Salt Co., Mr. W. W. Thume of the Inland Delray Salt Co., 442 Murphy Bldg., Detroit. Mr. D. B. Doremus, Secretary National Salt Producers Ass'n, was represented by his son.

Dr. Cowie briefly presented the subject of Goitre; its frequence in Michigan in man and animals; how it can be controlled by giving iodine; what doctors individually have tried to do in the prevention of goitre by giving iodine, and the results obtained; an outline of what has been done for school children by the co-operation of educational boards and interested citizens, and what had been accomplished in Switzerland by the use of iodine in the schools. He then presented the idea of iodizing all salt used for food for man and animals, pointing out that medical men had not found a method thus far which insured that all the people in the State of Michigan would get a sufficient amount of iodine. The poor as well as the family in easy circumstances, the man, woman and child in the remotest part of the State would unconsciously and without effort on the part of anyone, get the small amount of iodine that is necessary to prevent the development of the large per cent of goitres, if the iodine was contained in salt, the only food constantly used by man and domestic animals.

Dr. Levy and Dr. Cooley emphasized the importance of some method that would assure all the inhabitants of the State getting the proper amount of iodine. He told of the difficulties encountered when this problem was left to the individual physician who unintentionally would forget to see that all children, particularly, under his care were given iodine. He also pointed out that the probability that the amount of iodine given would necessarily vary with different physicians, and that by incorporating iodine in the salt, there would be perfectly uniform administration to everyone.

In the discussion, it was brought out that the work we were doing was purely a public service; that the physicians of the State were going into it from this viewpoint alone.

Dr. Cowie quoted Mr. J. B. Ford's statement to him that when the Salt Men really saw some public service to perform, we would find them all, more than glad to co-operate with us.

The question was thoroughly discussed by the Salt Men present. Each expressed his desire to co-operate with us in any way possible. They were definitely interested in assisting in this public service.

The following questions were brought up by them:

What would be the effect of the iodine added to the salt on the color of meat? Farmers like to bring pink colored meat to market. Some salt will change the color of pork. Would the iodized salt have this effect?

What would be the effect of the iodized salt on butter? On hides? On starchy foods?

The Hebrews want crude salt. If all salt is iodized, how would this problem be met?

It was suggested that the cost of the addition of iodine would be added to the retail price of the salt. The meeting adjourned with the assurance that the above questions would be carefully considered and that another meeting would be called during the winter, at which we hope to see more of the Salt Men present.

July 20, 1923.

Dr. C. P. Kimball,
Cleveland Clinic,
Cleveland, Ohio.

Dear Dr. Kimball:

Many years ago I became interested in the subject of goitre and have watched with interest the work of Dr. Marine and his co-workers. Three years ago it occurred to me that the best way to tackle the problem of goitre prevention was to pass a state law compelling some necessary product as salt to contain a certain per centage of iodine. Others have thought of this same thing but not exactly in this way. I have had a fair chance on several occasions to get this through the Michigan State Legislature but held back because of failure to find enough statistics on the amount of sodium iodide that migh effect individuals who have a tendency to hyperthyroidism. From my own small experience with cases of hyperthyroidism the amount of sodium iodide we would necessarily have to add to the salt would not be great enough to bring about any perceptible change in the exophthalmic's condition.

I could see no disadvantage to non-goitrous individuals getting this amount of iodine. However, as I said before, I did not go ahead with the idea. At the last meeting of the Pedriatric Section of the Michigan State Medical Society I outlined the plan I had had in mind and expressed the desire that this matter be taken up by the section, not by me individually, and that a committee be appointed to investigate the various phrases of the subject. I was appointed chairman of the committee. At the first meeting held in Ann Arbor last winter I assigned topics to the different members of the committee to work up. You have probably heard from some of these men.

It is now getting time for us to have our second meeting and I should like your opinion as to whether you think it safe and advisable to make an effort to get some legislation through. I am told we will not have much difficulty. Do you think the small amount that we would have to add to the salt could in any way be dangerous to non-goitrous individuals?

As a basis for our work I have kept tab on the amount of salt used in an ordinary family for a number of years. From this we can roughly estimate the amount utilized per capita.

I have re-read with interest your article received today on "Prevention of Simple Goitre." The school plan may be a better plan. The drinking water could easily be iodized. We have an expert manufacturing chemist on our committee who says it is a simple matter to evenly distribute the iodine through the salt. The law would act in this way: All salt entering Michigan would have to prove up a certain percentage of iodine. Although Michigan is a great salt producing state I was surprised to learn that most of the table salt comes from outside of Michigan.

Thanking you for your co-operation and an early reply, I am

Very truly yours,
D. MURRAY COWIE.

DMC:DET

CLEVELAND CLINIC
Euclid Ave. at 93d St.

July 23, 1923.

Dr. David M. Cowie,
320 South Division St.,
Ann Arbor, Mich.

My dear Dr. Cowie:

Your letter of July 20th received. Permit me to say that I have been thinking of this method of prevention of goitre for some time and have even talked this over with several state health commissioners with the hope of getting it passed as a pure food law. This, however, seems a long way off and if it could be taken up by any one state it would be a very great step toward the ultimate end on the prevention of this disease.

The amount which is necessary to prevent the majority of goitres would not, in my judgment, harm anyone. From our experience in working through the public schools on a large scale, we have not seen a single case of so-called hyperthyroidism and not a case of rash from giving a few milligrams per week. We could estimate from the amount of salt used per capita, the amount of sodium iodide to be used, such that each individual would get approximately two milligrams of iodine per week. Possibly even a smaller amount would prevent the majority of cases.

If you have the privilege of placing this before the state legislature, I would greatly appreciate the opportunity of co-operating in any way possible to help work out this important health measure.

If I can ever be of further assistance to you, I will be only too glad to hear from you then.

Most sincerely yours,

O. P. KIMBALL.

JAD:D

September 24, 1923.

Mr. J. B. Ford,
Ford Bldg.,
Detroit, Mich.

Dear Mr. Ford:

I think I spoke to you at one time about a goitre campaign I was interested in. Our work has gone along to the point where we wish to consult with the salt manufacturers. I am chairman of a committee of the State Medical Society, which has this matter under consideration. I am wondering if it would be convenient for you to have me come in some day before long and talk the matter over with you as I am sure you could give me the information we wish and advise us how we should proceed.

With kindest wishes to you all, I am

Very sincerely yours,

D. M. COWIE.

DMC:DET

MICHIGAN ALKALI COMPANY
Detroit, Michigan

September 26, 1923.

Dr. D. M. Cowie,
320 South Division St.,
Ann Arbor, Mich.

Dear Sir:

Your letter has been received upon my return from the east.

In reply would say that I expect to be here most of the time, and any time you let me know two or three days in advance I will have Mr. Browne at the office. so that you can get information which I perhaps could not give you. Of course, we are not salt manufacturers, but use a tremendous amount of it in liquid form in the manufacture of soda. Mr. Browne is, however, well informed on the new methods of manufacturing salt as a commodity, and I think most any other information which you might require.

Very truly yours,

J. B. FORD.

MICHIGAN ALKALI COMPANY
1622 Ford Building
Detroit, Michigan

October 27, 1923.

Dr. David M. Cowie,
c/o Cowie Hospital,
Ann Arbor, Michigan.

Dear Dr. Cowie:

I have just had a long talk with my friend, Mr. Lee, on the subject we were discussing, and he thinks your policy quite the wisest one in going ahead with this matter.

He tells me that the Diamond Crystal Salt Company and the Morton Salt Company are quite the largest distributors of salt in this community, both for table and dairy use. In fact, all of the uses of salt.

He stated that, Mr. Moore is the man to see in connection with the Diamond Crystal, and Mr. Morton of Chicago, in conection with the Morton Salt Company. These concerns, as I stated to you are located on St. Clair River. in fact, I think you could address the Diamond Crystal Salt Company at Chicago. In that way you could get the information from them as to just who to take it up with.

I hope this information will be of some use to you.

Very truly yours,

J. B. FORD.

JBF:F

November 13, 1923.

The Diamond Crystal Salt Co.,
St. Clair, Michigan.

Gentlemen:

As Chairman of a committee of the Michigan State Medical Society which has under consideration ways and means of preventing the development of goitre in Michigan, I am desirous of getting into communication with the proper person in your company with whom to take up the question of the Iodization of all salt used as food in Michigan.

The above plan has finally been decided upon as the best method of assuring that everyone receives the normal amount of iodine which is lacking in the food, water supply, etc., of the Great Lakes District.

Before carrying our work any further, we are anxious to counsel with the salt manufacturers and distributors in Michigan, acquaint them with our plan, give them all the information we have, and get their ideas on the question particularly as to whether there would be any objection from their viewpoint.

Thanking you for your co-operation, I am

Very sincerely yours,

D. M. COWIE.

DMC:DET

Same letter sent to Morton Salt Co., Chicago.

DIAMOND CRYSTAL SALT CO.
St. Clair, Mich.

November 15, 1923.

Dr. David M. Cowie,
320 South Division St.,
Ann Arbor, Mich.

Dear Sir:

We are in receipt of your letter of the 13th and in reply would say that we do not feel sufficiently posted to discuss the iodization of salt. However, if you can come here, we would like to call into conference two or three of our men so that we get all angles of it and talk the matter over with you.

We will all be here the latter end of next week—22nd to 24th inclusive—or any other date after that you may set.

We will be very glad to co-operate with the Michigan State Medical Society in anything we can do.

Very truly yours,

HENRY WHITING,
President.

HW:U

November 22, 1923.

Mr. D. B. Doremus,
Sec. Salt Producers Assn.,
550 Penobscot Bldg.,
Detroit, Mich.

My dear Sir:

As Chairman of a committee of the Michigan State Medical Society which has under consideration ways and means of preventing the development of Goitre in Michigan I am writing to you on the advice of Mr. Daniel Peterkin of the Morton Salt Company.

Simple Endemic Goitre is due to the lack of iodine in the food and water of the Great Lakes District. If a sufficient amount of Sodium Iodide could be added to some food, common to man and animals, such as salt, the majority of goitres can be prevented. The amount of sodium iodide necessary to do this is almost infinitesmal.

Mr. Peterkin refers me to you as the one best informed on questions that may arise in a discussion of this character. Mr. Henry Whitney of the Diamond Crystal Salt Company has kindly offered to co-operate with us in our quest for information.

We have been studying this question as a committee for over a year with the aid of expert chemists and other scientific men. We now want to talk to the Salt Producers, acquaint them fully with our plan, find out if there could be any objection from their point of view, and if so, to overcome the objection if we can. We feel sure of their full co-operation when they have all the information we possess on the subject.

This is purely a public service and one that will be

productive of much good to the inhabitants of this State. Would it be convenient for you to meet with the members of our committee in Detroit some time in the near future?

Thanking you for an early reply, I am

Very sincerely yours,

D. M. COWIE.

DMC:DET

DIAMOND CRYSTAL SALT CO.
St. Clair, Mich.

December 1, 1923.

Dr. David M. Cowie,
320 South Division St.,
Ann Arbor, Michigan.

My dear Sir:

In reply to your letter of the 28th, would say that we can meet you in Detroit if you can give us a date a few days ahead.

Next week the 3rd, 4th, 5th and 7th are taken, but the 6th and 8th are free, and up to date, all the week of the 10th is free. After next week, however, our time is comparatively open.

I would like to bring three others with me so that it is not as easy to set a date as if I were alone.

Yours truly,

HENRY WHITING,
President.

HW:U

SALT PRODUCERS ASSOCIATION
550 Penobscot Bldg.
Detroit, Michigan

December 3, 1923.

Dr. Murray Cowie,
University of Michigan,
Dept. of Pediatrics and Infectious Diseases,
University Hospital,
Ann Arbor, Michigan.

Dear Sir:

This will answer yours of November 22nd.

The manufacturers of salt would be very glad indeed to co-operate in the matter subject of your letter providing the amount of sodium iodine could be added to the entire output of table salt without detriment to it. It would be almost impossible to separate a portion of the product that would be shipped only into territory bordering the Great Lakes without almost doubling the cost of the product. However, I should be very glad to meet with your committee and go into the matter thoroughly at any time they desire to meet in Detroit.

In the meantime, please know that Eli Lilly & Co., of Indianapolis, Indiana, market a package called Nu-salt in 1-pound round cans which contains iodine and retail for 25 cents per package.

Yours respectfully,

SALT PRODUCERS ASSN.
D. B. Doremus, Secretary.

DBD:H

December 4, 1923.

Mr. D. B. Doremus,
550 Penobscot Bldg.,
Pontiac, Mich.

Dear Mr. Doremus:

Thank you for your letter of December 3, in which you kindly offer to co-operate with our committee. The point you bring up in an important one and it is just for this reason that we wish to consult with the salt men. I have called a meeting at the office of Dr. Thos. B. Cooley, 987 E. Jefferson Ave., Detroit, Tuesday, December 11, at 10 o'clock. There will be several men from St. Clair down to the meeting.

Hoping nothing will prevent your meeting with us at that time, I am

Very sincerely yours,

D. M. COWIE.

DMC:DET

CLEVELAND CLINIC
Euclid Ave. at 93rd St.

November 27, 1923.

Dr. David Murray Cowie,
320 South Division Street,
Ann Arbor, Mich.

Dear Dr. Cowie:

I have been intensely interested in the move that the Pediatric Society of Michigan started last summer, given me in your letter of July 20th. Also, later in the summer I had an opportunity to talk with Dr. Bennett of Flint who told me more of the possible move to get through the legislature this year the pure food law demanding certain sodium iodide content in table salt. This has always seemed the real solution of the goitre problem to me also. Dr. Marine also maintains the same attitude.

I am expected to give a review of the work on the prevention of goitre and its value at the State Public Health Meeting at Lansing, December 14th. I would be very glad indeed to hear from you and if nothing definite has been worked out I will not mention this idea of the Pediatric Association which will be brought out in due time.

You will be interested to know that I have started a more careful detailed examination of all the salt wells in the country as far as I can go to determine accurately the amount of sodium iodide in the different deposits of salt. This has never been done sufficiently accurately to determine the small amount of iodine which is entirely sufficient to prevent goitre and yet from a commercial standpoint all of the salt beds are reported as having no iodine. I will remember to keep you posted as soon as I can get any definite information on the subject. Hoping to hear from you in the near future, I am

Sincerely yours,

O. P. KIMBALL.

K*S

November 30, 1923.

Dr. O. P. Kimball,
Cleveland Clinic,
Cleveland, Ohio.

Dear Dr. Kimball:

I am glad to have your letter. We are going ahead with the salt proposition very carefully. So far I think we have not made any mistakes. We are now taking up the matter with the large salt distributors and producers of the State and hope to put through all this part of the work in the course of ten days or two weeks. There is more or less criticism and praise of the idea in various quarters of the state depending entirely upon the degree of information on the subject that medical men have. One of our greatest difficulties is going to be the unenlightened medical man so we are planning a careful campaign to increase the general knowledge of goitre among members of the profession and through them to the public. Our health board is very active in this matter. In fact any activity will ultimately turn out for good or any method of prevention proposed which utilizes iodine will also do good.

With regard to your talk in Lansing on Dec. 14th, there is no objection to your mentioning our idea of having the salt iodized. You had better say having the proper amount of iodine and not mention that we expect to iodize it as we have a strong body of Christian Scientists to consider who migh oppose the addition of iodine to salt or any other food.

I am glad you are looking up the iodine content of salt wells. Our investigation shows that there is very little iodine in salt produced in Michigan. The amount in the Midland Salt Deposits I believe tests the highest of any in the State but the amount received per capita from the salt of this kind would be nil. We are hoping to have you meet with our committee some time during this winter. Maybe you could stop off a day on your way back from Lansing and it might be possible for me to get most of the members of the committee together at that time.

Thanking you for your letter and co-operation, I am

Very sincerely yours,

D. M. COWIE.

DMC:DET

December 12, 1923.

Dr. Frederick B. Miner,
1010 Genesee Bank Bldg.,
Flint, Michigan.

Dear Dr. Miner:

It is best to leave the meeting as it is, we are not ready for Kimball yet. Dr. Kimball knows all about our scheme and his talk in Lansing is given in such

a way that it falls in with our committee work. We have done quite a lot of work since our last meeting. The situation of the Salt Men is all worked up, everything is now ready for our educational campaign. This is a long and somewhat tedious piece of work which will have to be done very carefully and which will take considerable time. So far I am quite sure we have made no mistakes.

Looking forward to seeing you in Jackson Friday, I am, with kindest wishes,

Very sincerely yours,

D. M. COWIE.

DMC:DET

SALT PRODUCERS ASSOCIATION
550 Penobscot Bldg.
Detroit, Mich.

December 12, 1923.

D. Murray Cowie,
University of Michigan,
Dept. of Pediatrics and Infectious Diseases,
University Hospital,
Ann Arbor, Michigan.

Dear Sir:

My son reported to me the discussion at your meeting yesterday at 987 E. Jefferson Ave., which I regret I was unable to attend myself. While I am not yet able to speak authoritatively on the best method by which your desired result can be accomplished through the manufacturers of salt, I will give the matter careful study within the next month as a system may be applied to each of the plants.

Of course, there are physical differences in the plants that manufacture salt. If the desire was to iodize only table salt or the salt consumed by human beings, it seems that it might be a fairly simple process but the fact that it must also be done for the benefit of animals, puts an entirely different light on it.

As you are undoubtedly aware, most of the salt that is prepared for table use, is treated with 1% of magnesia for the sole purpose of having it soft and in condition to run freely from the shaker in all kinds of weather. The mixing process by which this magnesia is introduced would probably admit of the introduction of the necessary quantity of sodium iodide but the salt consumed by animals is fed without rhyme or reason from any kind of salt that may be handy, mostly common, and this offers a considerable problem.

It is true that more than ever before, animals are being salted by using a block weighing 50 lbs., cube, which is made of kiln dried salt and it might be possible to introduce the sodium iodide into that block without great difficulty or expense.

At any rate, I shall do whatever I can to assist you in solving the problem and hope that when it is convenient for you to do so, you will drop into the office at Detroit.

Yours respectfully,

D. B. DOREMUS.

December 18, 1923.

Mr. Henry Whiting,
Diamond Crystal Salt Co.,
St. Clair, Mich.

Dear Mr. Whiting:

I want to thank you personally for the interest you and the men in your company have taken in our goitre campaign. We are going ahead with the problem you suggested to us at our meeting in Detroit and will give you results of these observations as soon as we have them done. For example, we are having some packers try the effect of iodized salt on hides and on the color of meat. Others are trying the effects of this salt on butter, starchy foods, etc. The results of our tests so far have shown that 1/100 of 1% of Sodium Iodide added to the salt produces no alteration in the taste of the salt and we will probably not need as great a content as this.

We are also placing in a number of homes, in exchange for their salt, our iodized salt which is made at the Midland Plant using the Diamond Crystal Shaker Salt and the Morton Shaker Salt as the basis. Our idea is to have them inform us of any remarks that may be made after a month's use of the salt. In this way we will have a pretty good check on whether any symptoms from the iodine are produced or whether any unpleasant taste is imparted to the food. There probably will not be as the salt will be necessarily very much diluted in the food. However, it will be well to have information of this kind.

I am delighted with the results of our meeting with you all and am quite convinced that the suggestion your men made with regard to the method of getting this salt to the public is far better than the plan we had thought of. This is a very good illustration of the importance of considering all factors concerned in a matter of this kind before rushing after legislation, etc. We will keep you posted on what we are doing and hope to have advice from you at a future time.

With kindest personal regards, I am

Very sincerely yours,

D. M. COWIE.

DMC:DET

Copy

January 22, 1924.

Max Burnell, M. D., Secretary,
Genesee County Medical Society,
Flint, Michigan.

Dear Dr. Burnell:

The goitre surveys that the Michigan Department of Health has been conducting in four selected counties will be completed and the results tabulated by February first. There is such widespread interest—and so much speculation—on the Michigan situation that the returns of an actual survey will be particularly valuable.

To give you the background—four counties were chosen on the basis of a survey of drinking waters of the State, carried on for several months through our Bureau of Laboratories. Two counties with no iodine content in their drinking water supplies were selected, and two with as high an iodine content as Michigan apparently affords. The school population was the group to be surveyed, and our entire field medical staff of six doctors and six nurses was detailed for the work.

There is no question but that this is the most extensive survey ever attempted, and particularly valuable in its bearing upon the rural situation. I am anxious that the results be given first to the physicians of the State. While prevention of goitre is basically an economic problem—a question of food supply—the initiative in the solution rests logically with the medical profession. The widespread popular interest must be given wise direction.

I realize that your Society programs are probably arranged for the year, but the urgency of the situation leads me to request that you give one evening to a discussion of goitre. I shall be glad to be present, if you wish, to give you a first hand report on the survey findings. A discussion of the preventive measures advanced, treatment of water supplies, salt, or use of tablets, would be very valuable.

May I ask for a reply in the matter?

Very truly yours,

R. M. OLIN, M. D.

Feb. 17, 1924.

D. M. Cowie,
Ann Arbor, Mich.

Dear Doctor:

Enclosed is a copy of Dr. Olin's letter to our County Society. You probably know of his plans. He does not intend to be many leaps behind our proposals and plans. Between both organizations, the subject will surely get to the front.

Thanking you for your kind thoughtfulness,

Sincerely,

FRED B. MINER.

SALT PRODUCERS ASSOCIATION
550 Penobscot Building
Detroit, Mich.

March 3, 1924.

D. Murray Cowie,
320 South Division St.,
Ann Arbor, Mich.

Dear Sir:

Confirming telegram this P. M. It seems it would be much more convenient to have the meeting this week, Friday, than any day next week.

I am calling the manufacturers of Michigan and Ohio here for your meeting, if, for any reason, you cannot

complete the appointment from your end, wil you wire me?

Thanking you for your courtesy in the matter, I am

Yours very truly,

D. B. DOREMUS.

DBD:H Secretary Salt Producers Assn.

THE DOW CHEMICAL COMPANY
Midland, Michigan, U. S. A.

March 6, 1924.

Dr. D. M. Cowie,
Cowie Hospital,
Ann Arbor, Michigan.

Dear Doctor:

I am sending forward today, by parcel post, seven packages of salt containing 0.01 of one per cent sodium iodide. There are two kinds of salt but each has been treated separately aud contains exactly 0.01 of one per cent of the sodium iodide put ou iu the form of a spray.

I trust that you will send these packages to the various doctors concerned and I will take with me to Detroit tomorrow morning some two-ounce samples of each.

With kindest regards,

Very truly yours,

WILLIAM J. HALE

WJH:E

MULKEY SALT COMPANY
Detroit, Michigan

March 8, 1924.

Dr. D. Murray Cowie,
c/o Medical College,
University of Michigan,
Ann Arbor, Michigan.

Dear Doctor:

Yesterday at our meetiug you spoke at length about the publicity we want to secure in connection with Iodine Salt. What is done in Michigau will secure the necessary publicity in this State, but it is going to be harder to work up enthusiasm in other States and secure the co-operation of the medical profession and health departments.

Would it be asking too much of you to prepare a pamphlet? We presume that most of the material for this could be taken from the lecture you have for use in Michigan. Possibly the whole lecture could be used if it is not too technical and contains enough illustrations such as the Akron school test. We should think this ought to be signed by you as chairman of the committee appointed by the Michigan Medical Society for the furthering of this work. If you could prepare a pamphlet of this kind we would have it printed and circulated among the doctors and proper public officials of all the States we want to reach with the Iodine Salt. We should also be pleased to furnish you with as many copies of the pamphlet as you wish to use. If you can prepare this for us we should like to have it at the earliest possible moment so we can get it into the hands of the printer. This pamphlet, of course, would be available to anyone wanting to use it, and if other Salt companies want to reprint same we would have no objectious.

Yours truly,
MULKEY SALT COMPANY,
J. L. Mulkey, Sec'y.

March 11, 1924.

Mr. J. L. C. Mulkey,
Sec'y Mulkey Salt Company,
Detroit, Michigan.

Dear Mr. Mulkey:

I am very glad to have your letter of March 8th. Our Committee is not vested with power to give out any signed statement as yet. We are getting ready to report back to the Council of the Michigan State Medical Society, the results of our meeting with the salt men. After that time we will be prepared to furnish you with information you can use, as coming from the State Society of our Committee.

The Ohio Salt Men do not realize how much work has been done in Ohio and other states. I believe that when Michigan takes the lead in this work, the other goitre state will soon follow.

We appreciate very much the splendid co-operation of the Salt Producers. It is best not to be too hasty in the matter.

I will keep you thoroughly posted on what we are doing, and at the earliest possible time convey to your association the desire of the State Society.

With kindest personal regards, I am

Very sincerely yours,

D. M. COWIE.

DMC:LD

March 12,1924.

Mr. D. B. Doremus,
Sec'y Salt Producers Association,
550 Penobscot Building,
Detroit, Michigan.

Dear Mr. Doremus,

In reply to your letter of recent date, I agree with you that we should not be too hasty in putting the salt on the market. I hope you will use your influence to keep the salt men from doing this uutil our Committee gets the authority from the Couucil of the State Society to give our O. K. We must be sure we are not violating the Pure Food Laws, which I am quite sure we are not and we must also be sure that the State Board of Health endorses the plan of iodization of the salt.

These are the points the committee has under consideration at the present time. It is very much better to progress cautiously than do something we may regret in the future. So far, the splendid co-operation of the salt men with our committee has resulted in no mistakes. I greatly fear if an effort is made to rush into this scheme, that some definite harm will come from it. There are precautions we will have to give you to print on your labels about the use of this salt.

I am very glad you have brought the matter up, as I had already been urging this same precaution on the part of some of the Salt Producers.

Very sincerely yours,

D. M. COWIE.

DMC:LD

March 13, 1924.

Mr. J. M. Petersen,
Sales Mgr., Ruggles & Rademaker,
Manistee, Michigan.

Dear Mr. Petersen:

Thank you for your letter of March 8th. I shall be very glad to send you the information you ask for at my earliest possible time.

I have taken up the matter of the O. K. of the Michigan State Medical Society with the Council. It will take a week or ten days to get the result of the matter of putting the iodized salt on the market. We have to be sure about the Pure Food Laws and the State Department of Health.

I was very glad of having the opportunity of meeting you in Detroit.

With kindest regards, I am

Very sincerely yours,

D. M. COWIE.

DMC:LD

March 13, 1924.

Dr. William Hale,
Dow Chemical Works,
Midland, Michigan.

Dear Dr. Hale:

You are a trump. We caunot express to you the appreciation we feel for the splendid co-operation you have given our committee.

The packages of salt arrived in due time, and have been forwarded to the different members of the Committee. There was a very strong odor of "Orange Blossom" to the packages, but not to the salt when it was poured out. I imagine this is due to the absorption of some odors at the plant by the carton.

We are having a referendum of the members of the Council of the Michigan State Medical Society taken. We hope to have enough votes by the latter part of the week to enable us to give the Salt Men our O. K. As I have stated before, we have no authority to give permission to use the name of the State Society on packages of salt dispensed by the salt men. That authority has to come from the council, which consists of 14 members, or from the Society in session.

I hope the Salt Men will be content to wait and not be too hasty. Should you see any of them, advise them that it is best to go a little slow just at present. If

this were an individual matter, we could soon have the State supplied with our product.

We must also be sure about the Pure Food Laws and the State Department of Health. We do not want to antagonize anyone.

Again thanking you for your co-operation and with kindest wishes, I am

Very truly yours,

D. M. COWIE.

DMC:LD

MICHIGAN STATE MEDICAL SOCIETY
Office of the
SECRETARY-EDITOR
Grand Rapids, Michigan

March 12, 1924.

TO THE MEMBERS OF THE COUNCIL.

Gentlemen:

THIS REFERENDUM is being referred to you by Chairman Jackson. You are earnestly requested to indicate your VOTE BY RETURN MAIL.

PROPOSITION

The proposition upon which this referendum is based will be stated briefly. It eminates from the Pediatric Section of our State Medical Society. The facts are:

1. For some two years the Pediatric Section has had special committee composed of its members who have been especially interested in the formation and adoption of some plan that would bring about a state wide use of a preparation of iodine. The committee has made many chemical experimentations and clinical observations. The result has been that the conclusion is definitely reached that a table salt, containing iodine, would be the most effective, most readily accepted and most widely used agent. Through further experimentation and clinical study a satisfactory iodized table salt was prepared.

2. The Committee now sought to obtain the interest and co-operation of salt manufacturers. It arranged and held several conferences with salt manufacturers. These manufacturers became interested and as their experiments and chemical studies progressed they perceived the value of iodized salt. As a result these manufacturers are now willing and anxious to manufacture and market an iodized table salt in accord with the Committee's investigations and recommendations. These manufacturers, however, desire to have the authority for the formula and its therapeutic value approved by the State Medical Society. The manufacturers, now that they have completed their investigations, do not desire delaying the distribution of this iodized salt.

3. The Committee of the Pediatric Section feel that this salt should be so endorsed but it does not have the power to endorse and approve it in the name of the State Medical Society. It therefore requests that the Council which is authorized to act for the entire membership of the State Society, grant authority to this Pedriatric Committee to certify to this salt as a safe, therapeutic preparation. The Committee is composed of members of our society and are Dr. Cowie of Ann Arbor, Dr. Cooley of Detroit, Dr. Larned of Grand Rapids, Dr. Miner of Flint, Dr. Bliss of Kalamazoo. Dr. Cowie asserts that this salt is possessed of genuine therapeutic merit, that there is no exploitation and that it will cost only a few pennies more per carton than ordinary table salt. That it will be a distinct contribution on the part of the Medical profession of the state to the people of Michigan.

The REFERENDUM IS: Do you approve giving authority to the Committee of our Pediatric Section so that it may state to the Manufacturers of this Iodized Salt that this Iodized Salt is endorsed by the Members of the State Medical Society?

PLEASE WIRE OR MAIL your vote upon receipt of this to,

Yours truly,

F. C. WARNSHUIS,
Secretary.

FCW:E

Saturday, March 15, 5 P. M. Dr. Warnshuis telephoned the result of the referendum vote. Ten for—three against. One not heard from. The Council approves the action of the Committee and gives them permission to give their O. K. to the Salt Producers as per the request of the Committee.

D. M. C.
March 17, 1924.

Mr. D. B. Doremus,
Sec'y Salt Producers Ass'n,
550 Penobscot Bldg.,
Detroit, Michigan.

Dear Mr. Doremus:

I am enclosing copy of an approval certificate endorsed by the Council and Pediatric Section of the Michigan State Medical Society to be placed on packages of iodized salt.

The Council and Michigan State Medical Society voted to support the action of our Committee until our next meeting of the Society in September, when the matter will be gone over thoroughly in the House of Delegates.

You will notice that it is important to underscore the words: **Individuals using this salt must not take other preparations of iodine without the advice of their physician.**

You will also notice the importance of impressing the public with the fact that the salt must be used for cooking as well as for table use.

I have sent a copy of this approval certificate to the Diamond Crystal Salt Co., Mulkey Salt Company, Inland Delray Salt Company, The Michigan Salt Works, and Ruggles and Rademaker Salt Company.

I beg to remain

Very truly yours,

D. M. COWIE.

DMC:LD

APPROVAL CERTIFICATE

This salt contains .01% sodium iodide, the amount approved by the Council and advocated by the Pediatric Section of the Michigan State Medical Society as a preventive of Goitre.

Individuals using this salt must not take other preparations of iodine without the advice of their physician.—(Signed) The Committee.

TO BE EFFECTIVE—THIS SALT MUST BE USED FOR COOKING AS WELL AS FOR TABLE USE.

DETERMINING THE AMOUNT OF SODIUM IODIDE TO BE CONTAINED IN THE IODIZED SALT

The amount of salt per capita per year has been variously estimated. Some have watched the amount consumed by individual families carefully and find 4 pounds per person per year the maximum. This naturally includes the amount consumed by visitors which is negligible. The Salt Producers have estimated the amount to be 5 pounds per person. Others basing their per capita amount on the salt consumption in certain institutions place the amount at 8 pounds per person.

In making its recommendations the Committee decided to err if at all on the safe side. They based the highest safe dose, 1 milligram per day, on the 8 pound per year salt consumption estimate.

As 2 or 3 milligrams of sodium iodide per week will prevent goitre, and 10 milligrams per week has been proved to do no harm it will be found from the following table that 4 pounds of our iodized salt per year per person will furnish approximately 3 milligrams, and that 8 pounds per year per person will furnish 7 milligrams per week, which is less than the maximum known to be harmless.

There are 453 grams in a pound.

.01% of 453 equals .0453 grams sodium iodide per pound.

4 lbs. iodized salt per year gives	1812.00	milligrams
Per day	0.49	"
Per week	3.43	"
Per day	0.98	"
8 lbs. iodized salt per year gives	3624.00	"
Per week	6.86	"

The Journal
OF THE
Michigan State Medical Society
ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

PUBLICATION COMMITTEE
R. C. Stone, Chairman.....Battle Creek
B. R. Corbus.....Grand Rapids
J. D. Bruce.....Saginaw

Editor and Business Manager
FREDERICK C. WARNSHUIS, M. D., D. Sc., F. A. C. S.
Grand Rapids, Mich.

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The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

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APRIL, 1924

Report Malpractice Threats Immediately to Doctor F. B. Tibbals, 1212 Kresge Building, Detroit, Mich.

Editorials

Place: Kalamazoo.
Time: April 16th.
What: 1. Meeting of Scientific Committee, 10 a. m.
2. Meeting of Joint Committee on Public Health Education, 12 m.
3. Conference of County Secretaries, 2 p. m.
Who: 1. All Chairmen and Secretaries of Scientific Sections.
2. Members of the Joint Committee.
3. All the Secretaries of County Societies.
4. Members of the Council.
5. Officers of the Society.

STILL BIRTHS

In casting about for means and measures to save to parents and through them to communities the lives of new-born infants that are forfeited during or immediately after labor it is wholly fitting that we review etiological factors. It is not fair to the parents, to the public or to the profession to issue a broad statement that these natal deaths are largely preventable and that they result entirely from causes over which we have a control and which can be wholly prevented. In any movement to lower the present rate of infant mortality it is not just to make broad, bold statements when a careful study of facts positively establishes an irrefutable premise.

We are heartily in favor of any movement that has for its object the lowering of our present neonatal death rate, provided that such a movement is not intended to create and establish a system that is inconsistent with out social institutions. We are distinctly in accord with the imparting to the public and to the profession, educational facts and frank information as to existing conditions. We would endorse and aid any movement that will induce parents to recognize that pre-natal care will lessen the morbidity and mortality of child-birth and which would cause them to go to their physician to receive that care and supervision. We would lend every support to a movement that seeks to still further educate physicians so as to make them more capable to render better obstetrical care and attendance to those who consult them. We are eager to elevate the standard of obstetrical practice. We are deeply concerned in the placing of the profession before the public in a light that will clearly set forth the facts that while the doctor has a definite obligation and a clear responsibility, the public is likewise charged with the same obligations and responsibilities and that present conditions are not the sole result of a medical profession's negligence or incompetency.

To refute such a charge, to prevent its gaining a impetus and being carelessly pointed out, as well as to present certain unescapable factors that largely create a big percentage of neonatal deaths and also to indicate wherein we may well become active, we are quoting the following extract from an article that appeared in the Long Island Medical Journal: The author is Dr. Morris Astrachan, and his conclusions are based upon a careful analysis of 1,035 labors during twelve months of 1923.

Emphasis is placed upon the following points:

1. A still-born mortality of 2.4 per cent and a neonatal mortality of 2 per cent.
2. One-third of the still-births were known to be dead on admission.
3. A difficult delivery accounts for about one-third of all still-births; placental bleeding, one-fifth; and unknown causes, one-fourth.
4. About half of the deaths of still-births and those who die within two weeks are beyond control by the obstetrician unless it be through antepartum work. These factors are pre-maturity, placental bleeding, congenital deformity, and so on.
5. Half of the deaths being due to a difficult delivery, are, in a sense, within our control. Improvement can be aimed at lessening this figure.
6. Cerebral pathology accounts for two-thirds of the combined loss.
7. Sub-dural hemorrhage is the commonest cerebral lesion.
8. Version and breech cases have also cranial hemorrhages in high proportion.
9. A diligent pathologist may be rewarded with illuminating autopsy findings, such as a dislocation of the atlas over the axis in a breech extraction.
10. There is a close statistical relationship between all records on the subject of still-birth and neonatal mortality.

STATE VENEREAL LAW UPHELD

A few months ago we reported a decision of a Judge of the Superior Court declaring the State Venereal Law unconstitutional. Appeal was taken to the Supreme Court. During the past month the Supreme Court handed down its decision which upheld the law. This concludes the matter.

We therefore are advising our members to comply with the provision of the Venereal Law which makes it mandatory to report all cases of venereal disease to the proper health officer on blanks provided. Failure to do so makes you liable to arrest, fine or imprisonment. We urge that careful observance of the law be contributed by every legally registered physician. We also trust that the proper authorities will prosecute these drug store counter prescribers.

THE KALAMAZOO MEETING

April 16th

Just as we go to press we are able to announce additional features for the Kalamazoo Conference on April 16th. These additional speakers give us the assurance that we can look forward to a most profitable and entertaining day. We recapitulate the program:

Date—April 16th.

Place—Kalamazoo.

10 A. M.—Meeting of Scientific Committee, Academy Rooms.

12 M.—Luncheon, Burdick Hotel, Joint Committee on Public Health Education and County Society Secretaries.

2 P. M.—County Secretaries Conference. Dr. Olin West, Secretary of the American Medical Association will be the principal speaker.

6 P. M.—Dinner, Burdick Hotel.

Addresses:

1. "Mirrors of Medicine," Morris Fishbein, Associate Editor, Journal of the American Medical Association.
2. Pediatrics, Isaac Abt, M. D., Chicago. Dr. Abt will have with him his guest, Dr. Finklestein of Berlin, who will also address us.

All the meetings will be held on fast time.

Members of the State Societies and who are not members of any Committee or County Secretaries participating in this conference are welcome to all the meetings and evening dinners. They should, however, make dinner reservations by writing to Dr. J. B. Jacobson, Kalamazoo. Please do this promptly so that ample accomodations may be provided.

SOCIETY AFFILIATION

The following, from the "Medical Economics", merits consideration and action on the part of our County Societies:

State	No. of Physicians	Members of State Society
Alabama	2,313	1,665
California	7,549	3,506
Illinois (Headquarters of American Medical Association)	10,716	7,609
Kentucky	3,155	1,858
Massachusetts	5,977	4,004
Michigan	4,653	3,192
Mississippi	1,792	848
Nebraska	1,913	1,147
New Hampshire	615	536
New York	16,857	9,472
Ohio	8,086	4,648
Pennsylvania	11,241	7,433
South Carolina	1,368	729
Texas	6,094	3,516
Washington	1,756	1,128
Wisconsin	2,722	1,959

These figures give much food for thought. It is difficult to imagine how a physician can desire to remain outside of organized medicine. The advantages of membership are many and the expense is trifling. In

some states, membership in the county, state and national organizations can be obtained for not more than $1.00 a month, and the disinterested observer would presume that every physician would be anxious to better his professional standing in a community by belonging to the proper organizations, even if for nothing else than for the protection of his professional standards. It should be regarded as good insurance with premiums at a very low cost.

Why should the individual physician belong to his county, state and national medical organizations? We present six answers to this question, each of which, we believe, is sufficient to cause a man to make the investment which would enable him to become definitely identified with the very best there is in the medical profession:

1. To have a part in organized effort for the promotion of the science and art of medicine and the betterment of public health.
2. To take advantage of opportunities offered in the medical society for individual scientific improvement.
3. To receive the benefits of friendly social intercourse with other members of the medical profession.
4. To assist in and receive the benefits of organized efforts for the promotion of the material interests of physicians.
5. To be identified with, and recognized as one of, the most reputable, progressive and best qualified group of physicians.
6. To lend your influence for the maintenance of the highest human ideals.

As we have said so often through the columns of "Medical Economics," if the medical profession is to get anywhere we must do it ourselves. We cannot do it until the profession is thoroughly organized, that is, until the majority of physicians realize the necessity of uniting with the organized profession.

We are firmly of the belief that if doctors were to join the medical societies as they should, it would be possible for a united profession to demand of Congress that a Department of Health be added to the President's Cabinet with a physician as its head for the safeguarding of that most precious boon—health. A thoroughly organized profession could go far toward eliminating the cults and isms and 'paths and 'actors that now tend to destroy the faith of the laity in the best there is in medicine. As we conceive it, it is the duty of all physicians to join the county medical society forthwith and then to progress upward and become identified with the American Medical Association, which has done so much for the profession during the past twenty years.

APRIL SIXTEENTH—KALAMAZOO

Meeting of Scientific Committee—Meeting Joint Committee on Public Health Education—Conference of County Secretaries

April 16th promises to be an important day in our organizational activity. For some time arrangements were being engaged in for the holding of the following meetings in Kalamazoo on April 16th:

Scientific Committee: This Committee is composed of the chairmen and secretaries of the Scientific Sections and the president and secretary of the Society. It is the duty of this Committee to arrange for the scientific program of the Sections for our Annual Meeting. The Committee will meet at 10 a. m. in the rooms of the Kalamazoo Academy of Medicine in the Public Library of Kalamazoo. It is imperative that every Section officer be present at this meeting.

Joint Committee on Public Health Education: This Committee will hold its stated meeting at noon. A luncheon will be served in the Burdick hotel. County Secretaries and members of the Scientific Committee are expected to attend this meeting. They are cordially urged to do so. They will receive an inspiring impression of the work that is being done and will gain an insight as to the importance of this educational movement. Do not fail to be present.

Conference of County Secretaries: This Conference, composed of all the secretaries of component county societies and the members of the Council and State Society will be called at 2 p. m. in the rooms of the Academy of Medicine in the Kalamazoo Public Library. The meeting will be presided over by Dr. C. C. Clancy, chairman of the Council's Committee on County Societies. The program will be as follows:

Opening Remarks—J. B. Jackson, chairman of the Council.

"What Constitutes Attractive County Meeting Programs," J. L. Squeir, Calhoun County.

County Membership and Attendance—W. G. Hoebeke, Kalamazoo Co. Society.

Organizational Opportunities, Olin West, Secretary American Medical Association.

Medical Legal Defense—F. B. Tibbals, Chairman.

Round Table—Individual and Common Problems.

There will be full opportunity for every secretary to engage in the discussion of these subjects. The purpose of the Conference is to impart helpful information and to aid each secretary to better carry on our organizational work throughout the state. County secretaries should not fail to attend

this important Conference which the Council has arranged for the advancement of the work and interests of our state organization. Kalamazoo is centrally located. Transportation facilities are ample and good roads will enable many to reach Kalamazoo by automobile. A 100 per cent attendance is expected.

Members of the Council are requested by Chairman Jackson to make it their duty to see that every secretary in their respective districts attends, and also urges that every Councillor be present at the noon luncheon and Conference.

The date is April 16th. The place is Kalamazoo.

GOITRE PREVENTION: A BRILLIANT CONTRIBUTION BY THE PEDIATRICIANS OF MICHIGAN

Our members are referred to the report that is published in this issue and which sets forth the work that has been done by the Advisory Committee of the Section on Pediatrics. This is a splendid piece of work that merits our approval and calls forth our congratulations to the members of the Committee. It is a contribution to the people of Michigan by the State Medical Society for it makes possible the universal use of an iodized salt that is simple, safe, of intrinsic scientific merit and recognized therapeutic value and provides an agent that will lessen the incidence of goitre in Michigan.

The profession of Michigan has thus again blazed a trail that will be followed by other states and which in the end will be recognized as one more contribution on the part of the medical profession toward conserving the public's health.

Editorial Comments

The State Medical Society of New York is actively supporting a new bill introduced in its legislature to control irregular practitioners of medicine. The bill seeks to safeguard the public from charlatans and members of the varied cults. It is, of course, being opposed by the cultists. The bill has two main features—the annual registration of physicians so as to certify them to the public, and the prosecution of the violators of the medical act. Considerable opposition was at first met with in the profession regarding the annual re-registration. However, when the purpose and feature of this re-registration became more clearly apparent, that opposition was withdrawn. We shall look forward to the passing of this new law in New York, for if it proves successful in cleaning out the imposters, the inefficient and the irregular, short-cut cultists, we will welcome such a law in Michigan and give little heed or thought to any petty annoyance that annual re-registration may occasion.

When one reads of an insurance company having some 21,000,000 policy holders, investing its surplus and reserve and confining that investment entirely to government, municipality and public utility bonds, is it not well to sit up and take heed? It is recognized that these are the three safest types of investment. Can you afford to be careless with your personal funds and invest them in less safe securities? Of course, if you want to take a flyer, have the means, can afford to lose it, you may be warranted in taking a chance. If you can't, then steer clear from speculative stocks and questionable bonds, no matter how attractively they are described by the suave salesman.

In a discussion of the papers presented in a recent symposium that was given under the auspices of the Chicago Gynecological Society, Dr. Joseph B. DeLee is quoted: "Is the mortality and morbidity of obstetrical practice in the United States as great as the proponents of the Shepard-Towner bill have led the public and some of the medical men to believe? If it is true that the mortality and the morbidity of obstetrics are both so high, why are they so high? If the people, instead of bothering about the Shepard-Towner bill, had got together to see that teaching hospitals were provided, they would not need any Shepard-Towner bill."

That opinion, expressed by a man whose reputation stands high in the profession, is food for much thought. We have heard so much about this mortality and morbidity and the whyfor has never been satisfactorily set forth. Figures are easy to collect and quote, as well as twist. Percentages can be calculated from several premises. They mean nothing. It is causes that we are concerned about and we are glad that as the result of this symposium this Chicago Gynecological Society passed the following resolution presented by Dr. DeLee: "I would resolve that the Chicago Gynecological Society appoint a Committee to investigate the cause of the present high mortality and morbidity in obstetrical cases in the mother and baby. Is it due to lack of good teaching? Is it due to inherent difficulties in practicing obstetrics; to hospitalization of cases, to puerperal infections in hospitals, to greater frequency of performing Cesaerean Section, or to the higher valuation of the baby's life that impels the accouchers to attempt operations dangerous to the mother?" We shall look forward to this report.

"Putoffitis," a form of sleeping sickness, seems to be afflicting a goodly number of the members at this time of the year when their dues are payable. By the provision of our by-laws and by special action of the Council, members whose dues are not paid on or before April 1st of each year are automatically placed upon the suspended list. They forfeit all the privileges and benefits of membership affiliation during the period of their suspension. Send in your check to your County Secretary today so as to remain in good standing.

It seems that Coue is back in this country—landing with a face wreathed in smiles, due, undoubtedly, to his vision of American dollars that are very effective in producing smiles. Coueism is the same hocus pocus that is swallowed periodically by sensationally-inclined beings of inferior mentality—a word fetish by which their mind is tricked. Until individuals will realize and grasp the fact that their education and civilian fitness will ever be defective until they take the trouble and time to learn the fundamentals of physiology, the rules of right living and the factors that undermine well-being it can be confidently ex-

pected that Christian Science, Coueism, cults and Abram's Electrionic reactions and all similar fads will find followers who will contribute their dollars to enrich these shrewd promoters. It is clear that the profession's obligation consists of the imparting of this knowledge through public lectures and a wide distribution of Hygeia.

It is a proper expenditure for your society to pay the expenses of your Secretary while attending the Conference of County Secretaries that is to beld in Kalamazoo on April 16th. He goes as your representative, in your interests and for the good of your county society. He contributes his time, loses that which his practice would yield him—it's but fair that your society pays his expenses.

This is the last Journal you will receive if you have not paid your current year's dues. You will be placed upon the suspended list and your legal protection is withdrawn during the period of your suspension. If you are in arrears, it behooves you to promptly make your remittance to your county secretary. Do it today. Delay may prove to be costly. Two members last year were unable to receive the services of the attorneys of our Legal Defense Committee because the action that was brought against them resulted from services rendered during a period of suspension. One of them had to employ his own attorney and paid out attorney fees of some $800—just because he neglected to pay his dues. It may be you this year who will find himself without protection just because of neglect. Get under cover, Doctor.

Hygeia may be subscribed for at the following club rates:

10 or more subscriptions	$2.30
25 or more subscriptions	2.00
50 or more subscriptions	1.75
100 or more subscriptions	1.50

Here's your opportunity for your society to place this journal in public reading places, factories and schools in your county.

Correspondence

TO ALL COUNTY SECRETARIES

Editor of the Journal of the Michigan State Medical Society.

As announced in a personal communication addressed to you a few weeks ago, the Council of the State Medical Society has arranged for a Conference of County Secretaries, to be held in Kalamazoo on April 16th.

The purpose of this conference is to provide an opportunity for all the County Secretaries to meet and discuss with each other and the officers of the State Society the problems that confront our profession and our organization. It is anticipated that such a discussion will lead to the adoption of a uniform plan of activity throughout the state that will be directed toward furthering those movements that are recognized as fundamental to future best interests of the public and of the profession. It is likewise anticipated that greater organized unity and effort will also result from a free and full discussion of the topics that are included in the prepared program.

The Secretaries are requqested to reach Kalamazoo by noon on April 16. The Joint Committee on Public Health Education will hold its regular meeting at that hour and luncheon will be served during the meeting that will be held in the Burdick hotel. President Burton is chairman of the Joint Committee and he and the Council are extremely desirous that each Secretary receive intimate information as to the work that is being done by this committee and the ends that are being sought. After the luncheon meeting the following program will be carried out:

1. Opening Remarks, J. B. Jackson, Chairman of the Council.
2. What Constitutes Interesting Programs for County County Meetings, J. L. Squier, Secretary Calhoun County Society.
3. "Membership and Attendance Problems," W. G. Hoebeke, Secretary Kalamazoo County Society.
4. "Organizational Co-Operation," Olin West, Secretary American Medical Association.
5. "Medical Defense," Frank B. Tibbals, Chairman Medico-Legal Committee.
6. Round Table Discussion, F. C. Warnshuis, State Secretary.

Under this heading opportunity will be given to discuss all the points raised in the preceding talks and any information that is sought will be imparted insofar as possible.

7. Resolutions.

As a County Secretary you are urged to make every effort to attend this Conference and participate in its deliberations. It is a duty that you owe to your local county society and to the profession. It is urged that you let nothing interfere that will prevent your being present.

J. B. JACKSON,
C. C. CLANCY.

A MOVIE FOR COUNTY MEETINGS

Secretaries' and program committees' attention is called to the following letter. This moving picture can be secured for your County meeting.—Editor.

Editor of the Journal of the Michigan State Medical Society.

The government film, "The Diagnosis of Tuberculosis," is a medical film dealing with inspection, palpation, percussion, auscultation, and differential diagnosis. It was produced by the war department, and is the most authorative film of its kind in this counrty.

As you know, the film was made in order to provide a standard for chest diagnosis to guide the thousands of physicians in the army who had been suddenly thrust into a routine and mode of procedure entirely foreign to their ordinary everyday life.

I am unable to obtain more detailed information than this regarding the film, and should appreciate any changes or additions which you may wish to make. I should like to receive from you a copy of the Journal in which the notation is to be made.

The film may be obtained by writing to the Michigan Tuberculosis Association, Lansing, Michiigan. Since it is subject to recall at any time, it is advisable that any group desiring the use of this film make arrangements with the Association as soon as possible. An operator will also be provided, if necessary.

Yours very truly,
WM. T. WATSON,
Educational Director.

State News Notes

COLLECTIONS

Physicians' Bills and Hospital Accounts collected anywhere in Michigan. H. C. VanAken, Lawyer, 309 Post Building, Battle Creek, Michigan. Reference any Bank in Battle Creek.

Owing to illness in physician's family one of the finest general practices in Detroit will be sold. Cash income exceeds $20,000 yearly. Location ideal. Equipment and furnishings the best. Competition negligible. Sale price at equipment invoice only is $5,000. Included are all home furnishings in situ., valuable appointments and a thorough introduction. Packard coupe optional. Lady office assistant knows entire clientele and will remain if desired.

Fees are excellent. No night calls and no confinements except at hospital. Surgical field unlimited. Ideal place for country physician of personality and ability who wants a wider field.

This is a real opportunity. No answer desired unless you are a successful physician, can come and investigate and have the money .

Possession given anytime between May 1st and July 1st. C/O Journal.

$12,000 Misouri Practice Free—Wonderful location—General practice—25 per cent collections. Good opening for small hospital. Overwork causes me to have to sacrifice proposition. Buy office effects and take location.—Address Journal.

NURSES' private home, invites convalescents and invalids; best of care, fine location. R. Rs. N. Y. C. and Interurban; best of references given. For particulars write Bessie Bileth, 566 Ely Street, Allegan, Mich.

DOCTOR WANTED for Lumber Company. Fine location. No opposition in 14 miles. Salary extra. Collections good. Write Physician, c/o Journal.

President Connor has appointed Dr. R. M. Kempton of Saginaw, Secretary of the Section on Pediatrics, succeeding Dr. Bliss of Kalamazoo. Dr. Bliss has taken up his residence in California.

Dr. and Mrs. A. W. Blain of Detroit are the parents of a newly arrived son, born February 7th, 1924.

On February 20th, 1924, Dr. Carl McClelland of Detroit gave a lecture under the auspices of the Central Committee on Health Education at Eaton Rapids. Dr. McClelland's subject was, "The Physiology of Sight and How to Prolong the Life of the Eye." The meeting took place in the high school before an audience of about 200.

On Monday, March 3rd, Dr. T. P. Clifford of Detroit was married to Miss Emma McCleary of Amsterdam, New York. Dr. Clifford and his bride will be back in Detroit the 1st of April.

Dr. W. H. Biebel of Detroit spent the month of March in the vicinity of St. Cloud, Florida.

Dr. Sam C. Hanna of Detroit enjoyed the last part of the winter in Los Angeles and Pasadena.

Dr. and Mrs. Claire L. Straith of Detroit have become the parents of a newly arrived daughter.

Dr. Walter Dumont of Ferndale was confined to Providence hospital, Detroit, with pneumonia during the early part of March, but we are glad to note his rapid convalescence.

Dr. and Mrs. C. D. Brooks of Detroit spent a week at Pinehurst early in March.

Doctors W. M. Marshall, F. B. Minor and M. S. Knapp of Flint attended the meeting of the American Congress of Internal Medicine at St. Louis, Mo. Dr. F. B. Miner received his Fellowship at this meeting.

Councillor H. E. Randall of the Sixth District has arranged for a district meeting at Flint, to be held April 16, 1924. An invitation is extended to physicians to attend. The following program has been prepared. Dr. Allen Kanavel of Chicago, will read a paper on "Infections of the Hand." Dr. Byfield of Chicago, will read a paper on, "Some Pitfalls in Diagnosis." Either Dr. Frank Tibbals, or Mr. Barbour of Detroit, will give a talk on Medico-Iegal subjects.

Dr. W. H. Marshall of Flint, addressed the Senior High students on "The Practice of Medicine as a Vocation."

Dr. C. H. O'Niel of Flint is spending the month at points in Florida.

Dr. J. W. Orr of Flint is expected home soon from Florida.

Dr. LeFevre of Muskegon will address the medical staff of Hurley hospital, Flint, some time next month.

President Guy L. Connor of Detroit and Dr. B. D. Harrison, Detroit, attended the Conference of Examining Boards and Council on Education that was held in Chicago, March 5th.

Dr. Dean Lewis of Chicago, addressed the Detroit Academy of Surgery on March 14. His subject was "General Infections."

The Kent County Medical Society conducted a public meeting on March 19th on the subject of cancer.

Mrs. J. B. Whinery, wife of Dr. J. B. Whinery, Grand Rapids, died on March 14th. The sympathies of the profession is extended to Dr. Whinery in his bereavement.

Dr. E. S. Browning, Grand Rapids, announces that he has limited his practice to urology.

Dr. Alfred W. Warthin, Ann Arbor, was elected vice-president of the American College of Physicians at the St. Louis meeting. Dr. Warthin was also selected as editor-in-chief of the Annals of Clinical Medicine, the official publication of the College of Physicians.

Dr. E. C. Warren and Dr. C. A. Stewart, Bay City, have returned from a month's sojourn at Miami, Florida.

Dr. D. Emmett Welsh, Grand Rapids, has returned from a two months' outing in Florida and Cuba.

Appointment of staff officers and reorganization of the hospital into four departments with various divisions, each headed by a chairman, were announced by the board of trustees of Blodgett Memorial hospital, Grand Rapids.

Dr. Thomas C. Irwin was named chief of staff and Dr. Henry J. Pyle, vice chief of staff. Dr. Charles E. Hooker was appointed secretary of staff.

Members of the hospital executive committee were named as follows: Dr. Richard R. Smith, representing the department of surgery; Dr. Thomas DeWitt

Gordon, department of medicine; Dr. Alexander N. Campbell, department of obstetrics; Dr. F. N. Smith, department of oto-laryngology, and Dr. B. M. Morrill, superintendent of the hospital.

Division chairmen and the divisions they will head were designated as follows: Dr. H. J. Vandenberg, surgery; Dr. John T. Hodgen, orthopedics; Dr. J. R. Coryell, urology; Dr. Reuben Maurits, anaesthesia; Dr. William Northrup, medicine; Dr. Collins H. Johnston, pediatrics; Dr. William McKay German, pathology; Dr. Charles E. Hooker, dermatology; Dr. P. J. DePress, neuro-psychiatry; Dr. T. O. Menees, laboratory; Dr. F. N. Smith, oto-laryngology; Dr. Francis J. Lee, gynecology; Dr. Elton P. Billings, obstetrics; Dr. C. E. Beeman, ophthalmology, and Dr. Wilhelmina Yeretsky, dentistry.

POST-GRADUATE CLINIC TOUR

Interstate Post-Graduate Clinic Tour to Canada, British Isles and Paris in 1925 is now being arranged under the supervision of the managing-director's office of the Tri-State District Medical Association. The time for leaving will be about the middle of May. The tour will consume approximately two months' time and the total cost from Chicago and back to Chicago again will be less than $1,000. This will include all clinic arrangements and admissions and all traveling expenses, except meals on Pullmans in America and tips on the ocean steamer. First-class hotels will be used everywhere and the ocean passage will be on the largest and finest of the new one cabin ships.

Clinics are being arranged in Dublin, Belfast, Liverpool, Manchester, Leeds, Edinburgh, Glasgow. Newcastle, London and Paris and other points of clinical interest. The clinics will be conducted by the leading cinicians of these cities. The opportunity will be given, subsequently, to visit the clinic centers in other parts of Europe.

This tour is open to members of the profession who are in good standing in their state or provincial societies, and their families and friends.

Sight-seeing programs will be arranged practically every day abroad, including the most scenic part of the countries visited, without extra cost.

On account of the great demand for reservations, applications should be made as early as possible to Dr. William B. Peck, managing-director, Freeport, Illinois. Preference in the assignment of hotel and steamship accommodations will follow the order in which the applications are received.

Deaths

Dr. Morton Gallagher died at his home in Bay City, February 14th, of chronic nephritis. Dr. Gallagher was in his sixty-first year.

He had been active in the Bay County Society, civic affairs and the Masonic order.

The death of Dr. H. R. Pearce of Battle Creek on October 27, 1923, has been reported. The doctor was born in Toronto, Canada, in 1866, and was a graduate of the University of Tonorto. He had practiced in Battle Creek and vicinity for about 28 years.

MEDICAL PREJUDICES

There are people who would rather have a hundred rats or dogs saved the pain of vivisection than to have a million human lives saved from disease and suffering through the experiment. Organized into leagues, and appealing subtly to tender emotions and sentiments, they have proved a serious obstacle at times to the advancement of medical science. Similarly, organizations have been formed in the United States to oppose vaccination on the ground of personal liberty—as opposed to the public health. Other societies strive to lower the standards of medical education.

With Charles W. Eliot, Charles Evans Hughes, Bishop Mann and Cardinal O'Connell among its leaders, a backfire against this propaganda has been started in the form of the Society of Friends of Medical Progress.

Its aims will be to encourage and aid all research and humane experimentation for the advancement of medical science; to inform the public of the truth concerning the value of scientific medicines to humanity and to animals; and "to resist the efforts of the ignorant or fanatical persons or societies constantly urging legislation dangerous to the health and well being of the American people."

Laymen—not doctors—will form the membership bulwark of this society of intelligence, on the excellent ground, as expressed by the Journal of the American Medical Association, that "intelligent laymen are quite as responsible for public security as are the members of the medical profession." Science in medicine has always fought its way successfully against ignorance of medical knowledge and prolongation of human life has been astonishing in spite of obstacles; but progress, while it cannot be halted, can be slowed to the detriment of national health by mistaken opposition.

Anything which tends to spread among the people the facts of the triumph of medical advance through scientific experiment, and of its effect in lightening the burdens of many millions of lives, is worth indorsement. It speeds the time when science will not have to combat the uniformed mind of the man whose body it may later have to save.—G. R. Press.

FIND TELEPHONES TO BE FREE FROM GERMS

Do public telephones sometimes make you shudder and think of germs?

Well, they need not, if one places faith in the results of a recent investigation in London, told of in the April issue of the popular health journal, Hygeia.

To learn if public telephones are carriers of disease, says the health magazine, the British postmaster-general recently had a series of tests made with telephone mouth pieces at busy call offices. No tuberculosis germs were found.

Not satisfied with the tests made at the public pay stations, the postmaster-general had telephones fitted in the wards of a sanatorium to be used only by patients in different stages of tuberculosis.

These instruments were in use for varying periods and were not cleaned or disinfected during the time of the experiment. Bacteriologists then inspected them and found no evidence of bacilli. The conclusion was that the transmission of tuberculosis through the telephone mouthpiece was so unlikely as to be almost impossible.

However, in London a staff of cleaners is employed permanently whose duty it is to disinfect telephone transmitters and receivers in all the public call stations regularly every three days.

DON'T WORRY IF YOU CAN'T SLEEP NIGHTS

To make a business of sleep is a bad habit. That is what persons do who worry because they can't sleep.

In answering a question about insomnia, Hygeia, the popular health magazine, in its April issue declares that the chief harmful effects from not sleeping are caused not by sleeplessness, but by worry over not sleeping.

Sleep should and will come naturally, if one will only realize that it is rest and not sleep that is needed, says the health journal.

Of course, it is important to pay attention to the ordinary rules of hygiene, with regard to exercise, fresh air and reasonable diet. But above all, it is important to fill one's life with satisfactory work and play.

The best incentive to sleep is still the feeling of "something attempted, something done," particularly something to help others.

As to the amount of sleep needed by different persons, that varies within wide limits and is much modified by habit. Many energetic, active indipostmaster-general recently had a series of tests hours of sleep. The proper amount for the average adult, however, is usually between seven and eight hours.

County Society News

GENESEE COUNTY

MINUTES

January 23, 1924, Genesee County Medical Society met for noon luncheon at the Hotel Dresden.

Speaker—Dr. F. Kidner, Detroit, Mich.

Subject, "Fractures of the Femur."

February 6, 1924, Genesee Medical Society met for noon luncheon at the Hotel Dresden.

Speaker—Dr. Cooley, Detroit, Mich.

Subject, "Prophylaxis of Heart Disease in Children."

At this meeting the question of holding a joint meeting between Bay, Saginaw and Genesee County Medical Societies was considered. The date set was April 16, 1924.

February 20, 1924, Genesee County Medical Society met for noon luncheon at the Hotel Dresden.

Speaker—Dr. H. K. Shawn, Detroit, Mich.

Subject—"Diseases of the Breast."

March 5, 1924, Genesee County Medical Society met for noon luncheon at the Hotel Dresden.

Speaker—Dr. W. D. Mayer, Detroit, Mich.

Subject, "Thrombo-Angitis-Obliterans."

George J. Curry, Secretary.

HOUGHTON COUNTY

The Houghton County Medical Society met at its regular meeting at the Douglas House, Houghton, Mich., March 4, 1924, with twenty-two members present. There were also as guests of the Medical Society, supervisors, superintendents of the public schools and others interested in public health work. Dinner was served at six o'clock, after which the following program was carried out:

Dr. R. M. Olin was unable to be present, so Dr. R. B. Harkness, a member of the State Board of Health, gave the complete figures of the recent goitre survey in Houghton County. The entire subject of goitre in all its relations was thoroughly covered by the papers presented and the discussion of same. Four counties were selected by the State Board of Health for the recent goitre survey, being Midland, Wexford, Macomb and Houghton. Out of 13,820 school children examined in Houghton County, 64.4 per cent had goitres; 6,860 boys and 6,865 girls. The ages of occurrence of the boys were 9 to 12, and girls 12 to 13. It has been found on examination of the water in various parts of Houghton county that it contains practically no iodine. It has already been proven by the work of Kimball and Marine that if we supply a small amount of iodine, these goitres can be reduced or prevented. Several means to supply this to the children, either in the form of tablets or in table salt, are being considered by the State Board of Health. The several types of goitre were presented by Dr. Harkness and examined by those present. The "Pathology of Goitre" was taken up by Dr. A. LaBine; "Metabolism in Goitre," by Dr. S. Levine; "Heart in Goitre," by Dr. P. Bourland; "Goitre in Pregnancy," by Dr. A. D. Aldrich; "Surgery of Goitre," by Dr. H. M. Joy. A very free discussion of the entire subject by the physicians and laymen present followed.

It was decided at the business session of this meeting that I, as Secretary, would attend the conference of County Secretaries in Kalamazoo, April 16. Kindly furnish me with full details of this meeting so that I may make my arrangements to attend.

The application of Dr. K. C. Becker of Baltic, Mich., was received and referred to the Board of Censors.

The very kind offer of Dr. E. W. Smith of Neopit, Wis., offering his farm and land in Florida for a winter home for the Houghton County Medical Society was referred to the committee, consisting of Dr. Bourland, Dr. Moore, and Dr. Scallon for further investigation.

There was a motion made that the Secretary report to the Prosecuting Attorney of Houghton County the case of the death of Edward Hecker of Houghton, of diphtheria, a case of neglect and the use of Christian Science practitioner. I shall furnish the Journal with further details of this case after the investigation.

A very interesting letter was read from Dr. A. S. Warthin of Ann Arbor, Michigan, on the question of goitre.

It is our intention in the very near future to mail to you the papers on the above subject which were read at this meeting.

G. S. Stewart, M. D., Secretary.

WASHTENAW COUNTY

I note that I have failed to give you earlier notice of change of officers for the Washtenaw County Society since January. Our president is Dr. Theron S. Langford. The Secretary remains the same. I am sure you will wish to make that change in the list of officers as given in the Journal.

Our Society has been having monthly meetings since January, instead of the meetings four times a year, as previously. At our last February meeting we had a report of an unusual case of a death caused by the presence of a darning needle transfixing the medulla, given by Dr. G. S. Weller. The occurrence of the case can be best explained only as a very unusual accident. At the same meeting Dr. Olin presented the results of his very interesting study of relation between iodine content of drinking water and the presence of goitre among school children in Michigan.

Yours very truly,

W. E. Forsythe, M. D., Sec'y-Treas.

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Original Articles

THE ESSENTIAL INTERDEPENDENCE OF MEDICINE AND NURSING

Presented at the Convention of Ontario Nurses at Windsor, Ont., April 24, 1924.

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It is perhaps presumptuous in this day and age for any physician to undertake to discuss the problems of nursing with a group of experts in that field, but it is precisely because I vaguely sense a certain drawing apart of physicians and nurses that I am bold enough to take your time in discussing the relation of the two professions.

At the outset it is not unwise to remember that medicine is an exceedingly old profession and that it has had ample opportunity to encounter the problems inseparable from growth of knowledge and the changing organization of society. Thus many of the problems which arise in the development of a group whose only excuse for being is the care of the sick and the prevention of disease, have been met and dealt with in the past. It is also wise at this time to recall that nursing as an organized profession is very young, hardly more than half a century old, that it has had a very rapid, spectacular and well deserved growth, and that its problems are not entirely different from those which have come up for solution by the medical profession. For these reasons it appears to me that those who are vitally concerned with the development of nursing will be well advised to consider at the various turning points of their development whether or not similar questions have been faced by the medical profession, how they have been solved and whether in the light of developments the solutions have been sound.

The development of nursing has clearly been the result of the increasing complexity of the science of medicine. Too often it is thought of, and particularly by the laity, as simply a group of people whose chief business is making patients comfortable. This is undeniably an important function of nursing, but equally undeniably it is not its chief function. Its chief function, as I see it, is making the practice of medicine efficient. It is in fact a department of applied therapeutics, one in which the necessary principles are laid down by the physician, but in which the chief application of these principles is through members of the nursing profession.

It is, I think, generally admitted that the physician and the nurse in the care of disease are inseparable. Some of you may remember a line of our former friend, Mr. Dooley, who in discussing Christian Science spoke as follows: "You know, Hennessey if the doctors had a little more Christianity and the Scientists a little more science, it wouldn't make much difference which you had, if you got a good nurse." This voices the general acceptance of the view that nursing is today an essential part of the efficient practice of medicine. But this is not all. Just as the practice of medicine never stands still, so the practice of nursing cannot stand still. With the increasing development and increasing complexity of medicine there goes of necessity increasing complexity of nursing. In nursing as in medicine there is a clear tendency to the development of specialties, and one now sees many women who almost from the outset of their training have a clear plan to qualify themselves as experts in the field of nursing. Many positions in connection with hospitals call for experts in nursing. Public health nursing has become a very distinct specialty, and one might even point to the development of the industrial nurse as a growing specialty. All of this means, as I see it, an increasing interrelation between medicine and nursing, and lays upon those who would wisely guide the development of nursing education the requirement to survey widely the field, to see how the problems of nursing and the problems of medicine are similar or at least parallel, and to avoid some of the mistakes which have clearly been made in the rather haphazard development of medical education.

At this point I am inclined to call your attention to the fact that the interrelation is so close that there are many points at which it is not easy to say whether the nurse, in the proper execution of her duty, is not in fact engaged in the practice of medicine. Many of you have probably heard mutterings of this sort, and there are, I think, a considerable number of physicians who distinctly fear that the growth of the nursing profession will bring them into a territory regarded as staked oc by the profession of medicine. I must confess that it seems to me that these fears are largely groundless. There is no doubt that in the rapid growth and important change of the practice of medicine many of the things formerly done by the physician are now done by the nurse, wholly to the advantage of all concerned. It is quite impossible, as I see it, to draw a line at which the practice of nursing should stop and the practice of medicine begin. No such line is possible nor do I believe it to be desirable. The outstanding fact of the situation appears to me to be that in all these cases where there is doubt as to where the line should be drawn, the nurse is in fact acting as the agent of the physician. The situation is not unlike that of the surgeon who associates with himself numerous assistants, including an anesthetist. For all these people before the Law he is responsible. They are his agents. Any accident happening as the result of their ineptitudes are charged to him. He cannot divest himself of the responsibility, and it is unwise that he should do so. The public very properly wishes to be able to hold someone responsible and quite simply and properly looks to the physician upon whose general orders these people depend for their guidance. A similar line of reasoning may, I think, be applied to the situations in which it appears that the practice of nursing and the practice of medicine are likely to collide. It is unquestionably true that the interest of the public demands that nurses be not only allowed, but encouraged to do those things for which they are equipped. This will inevitably take them into the border lands of the practice of medicine, quite as I believe to the interest of the public.

If my major premise be true and the professions of nursing and medicine are inextricably intertwined in their development, it will necessarily follow that many of the problems of nursing education and medical education are the same, and I hope, as one profoundly concerned with medical education, that you will bear with me in some suggestions in regard to nursing education. It is quite clear, in fact beyond discussion, that those who are to assume responsibility in the community for the care and management of disease must have a reasonably sound preliminary education. With the present wide diffusion of educational possibilities it does not seem too much to require a secondary education of high school grade. The general rule that applicants for training in nursing schools should have a high school diploma is unquestionably sound. It would, I believe, be wise to leave some loop hole through which might slip occasional women of first class qualifications who, through some accident of fortune, had failed to finish their high school course. In the last quarter of a century there have come to me on several occasions, as have doubtless come to many of you, a number of women whose experience in the world and whose education, using the word in the broad sense, amply qualified them to take a nursing education and who yet lack some of the qualifications of a high school diploma. For these people some machinery should be constructed so that they might be adjudged to have qualifications equal to a high school diploma. The number will probably not be large, but it is my best guess that in this group some of the most outstanding nurses will ultimately be found.

There will be little disagreement with the general regulation that the course in nursing leading to a diploma and to permission to register as a trained nurse should cover about three years. It is perhaps true that by removing from the curriculum certain work not essential to a nurse's training the period may be somewhat curtailed. On the other hand, time is an element of first class importance in qualifying anyone for so intricate a business as the care and management of the sick. Mere contact with sick people is a most fundamental requirement, and it may fairly be doubted whether any very important diminution in this time requirement can be made.

At this point I desire to call to your attention to certain fundamental practices which have grown up in medical education and which are now causing medical educators the greatest concern. It is nearly a generation since the medical curriculum was profoundly altered by the introduction of what is knomn as the Concentration System, in which the fundamental subjects of Anatomy, Physiology, Bacteriology, Pathology, etc., were taught at the very beginning of the course and all contact with patients was pushed into the later years of the curriculum. This plan gave every evidence of

being a most promising and fruitful alteration, but, so fallible is human judgment, it has returned to mock us with the notorious insecurity of our own decision. To some extent there was overlooked in this system the now well known fact that theory and practice must go hand in hand. This whole Concentration System was based upon the assumption that theory should precede practice and as a result there was produced a medical curriculum which I frankly believe to be a pedagogical monstrosity. If there is one fact in education more certain than another, it is that the wide separation of theory from practice spells failure in the acquirement of knowledge. We remember those things which we use and we notoriously forget those things for which we cannot see the application.

It is, therefore, to be hoped that in the construction or alteration of the curriculum of nursing schools this pedagogical blunder in the teaching of medicine will not be perpetuated.

In my best judgement those parts of the fundamental sciences which must be known to the nurse, can be acquired most certainly and anchored most securely if taught in very intimate relation to the study of disease and the care of patients.

If we are prepared to admit, and the reasoning appears to me to go on all fours, that nursing is not simply the business of making people comfortable, but it is in fact the application of treatment to disease, then it follows that the education of the nurse must include a broad and fairly comprehensive knowledge of the manifestations of disease. It is no longer possible for us to pretend that a roundly educated nurse can be ignorant of the general facts of health and disease. It is possibly true that the amount of medical knowledge which it is necessary for a nurse to have at the present time will exceed the amount of knowledge which it was necessary for a physician to have a century ago (so far have we come in the development of the Science and Art of Medicine). If in three years she is to acquire a rounded knowledge of the manifestations of disease and of the principles of treatment, she must have most intimate contact with patients and be more or less constantly under instruction.

The fundamentals of this instruction can, I believe, be best given by the physician; the details best by those trained not only in the practice of nursing, but also in the practice of teaching. In the construction of an ideal staff for a nursing school the attempt must be made to secure scientists with knowledge of the fundamental sciences, physicians with knowledge of the every day manifestations of disease and nurses who have spent time in the care and management of the sick.

It may seem that I have taken no account of the education which must form the foundation for the developing specialties of nursing, but the apparent oversight was quite intentional. I entirely realize the importance of further education for those who are going beyond the stage of qualification for the care of the individual sick. I believe, however, that the training of executives, of teachers of nurses, of public health nurses and of industrial nurses should have as a foundation the normal three years' course in nursing. I cannot bring myself to believe that the best training for these advanced positions should be begun with a long and complicated study of the fundamental sciences. This appears to me to invite the same blunder which has been committed in medical education. The training for the nursing specialties should, I think, be a continuation of the training of the ordinary, sometimes called private duty nurse. Clearly the public health nurse and any of the many subdivisions of this group must know more of the great field of preventive medicine and know much of the relation of the Law and of organized society to disease. The industrial nurse must be thoroughly familiar with the intricacies of the compensation law to say nothing of the additional knowledge of the complications likely to ensue from the various industrial accidents. But this training, as it appears to me, should be what one might call post graduate work tacked onto the preliminary education which will have enabled these people to come to a decision as to the line for which they are properly suited. Training for many of these specialties will require two or even three years of additional work, but with the background which they will have already obtained I believe their education will progress more rapidly, more fruitfully and more securely.

I am not impressed with the plan at present in operation in some schools of nursing to require these women to decide at the very outset of their contact with nursing that they desire to follow, particularly some special line. This is not the way in which the human mind works, and decisions made in advance to follow certain special lines over a considerable period of years, are likely in many cases to turn out as faulty judgment.

There is one further question constantly

intruding itself in these discussions of nursing education, and this has relation to the possibility of developing a group of people less trained than the present trained nurse and yet available for the care of the sick. No one will deny the desirability of the development of such a group—a group often referred to as trained attendants—but the education of these people appears to me to be surrounded with the gravest difficulty. They must have some knowledge of the nature and cause of disease, but it is probably true that the less they know, the more they will think they know. Inevitably as time goes on they come to think of themselves as quite the equal of the registered nurse, demand equal consideration and compensation and in fact delude the public, if indeed they do not bite the hand that fed them. Time may bring some solution of this problem, but at the present time I incline to the view that the attempt to train attendants on a large scale will have as its chief effect the lowering of the standards of nursing obtained only with the gravest difficulties and will not in fact produce what we seek, namely: willing hands and humble minds. The solution, I think, must be sought in some other direction.

Finally I should like to call to your attention what seems to me certain signs of the time. We are all conscious of the fact that the doings of those who offer service to the community are at the present time under rather strict appraisal. Particularly is this true of those who are to any extent in the public service. For this reason those dealing officially with the problems of health and disease and who are allowed by the State through its Registration Boards to assume these responsibilities must be very sure of the nature and quality of the service which they are offering. It is essentially a time when all those who are concerned with the care of the people's health should be working together to a common end. There are folk aplenty who will attempt to discredit us and who will not hesitate to adopt any methods likely to be successful. Their efforts at the present time have been crowned with success to the point that they have succeeded in creating suspicion. That the suspicions are largely groundless is not a satisfactory answer. Only the clear evidence of performance, of unity of purpose and of a pervading spirit of service will prove convincing. It is, I believe, a singularly unpropitious time at which to allow minor differences of opinion to distract our attention from the main issue. These differences of opinion are sure to be exaggerated and the public will appreciate only the fact that we are not single hearted in our endeavors. The professions of medicine and nursing acting together in sound co-operation cannot fail to win public approval. The profession of medicine and the profession of nursing working apart will lose not only public confidence, but inevitably their standing in the community.

In the great field of medicine and preventive medicine, nursing is the great department in which women have scored a signal success. It is not an accident that in the last quarter of a century they have in this department literally driven the men from the field. This is due to performance and not to accident. In the other departments of medicine, women have scored a less signal success and in the active practice of curative medicine they are not importantly more represented than they were a quarter of a century ago. Looked at from this angle it appears to me highly desirable that the women in all the departments of medicine should unite in their endeavor to put upon the soundest basis nursing in all its ramifications so they may produce the profoundest effect upon the progress of civilization.

THE PRACTICAL SIGNIFICANCE OF THE FUNCTION AND ANATOMY OF THE BASE OF THE CRANIUM AND CRANIAL NERVES IN THE PRACTICE OF OTOLOGY, OPTHALMOLOGY AND RHINOLOGY*

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There is probably no other part of the body where the anatomy of the parts involved determines so definitely the course which infections may follow and where the physiological response thereto is so frank and constantly accurate as in the head. In the consideration of diseases of the eye, ear and nose, one should also remember that anatomical changes are occurring as the individual develops and that associated with this development are changes in function.

There are certain anatomical and physiological differences between the adult and baby skull. Therefore, in the consideration of the matter before us, we shall first consider the ear of the child.

*Read before Section on Ophthalmology and Oto-Laryngology, M. S. M. S. Annual Meeting, 1923, Grand Rapids.

CHILD'S EAR

In the external ear of the baby the bony portion has not developed. At birth the whole of the external meatus is catilaginous. At one year it is one-third bone, at the age of five or six they are about equal. Sebaceous glands in the meatus of children open into the hair follicles, but do not in adults. At birth the antrum is present and about the size of a small bean. The mastoid air cells are not present. The tympanic mebrane in babies is almost horizontal. The petro-squamous suture is open at birth and permits direct communication between the antrum and the middle cranial fossa; this suture closes at the end of the first year, but a vein, the petro-squamous, persists. At birth the outer wall of the sinus is formed by the post meatal plate of bone which is only 2 mm. thick. (see chart No. 1).

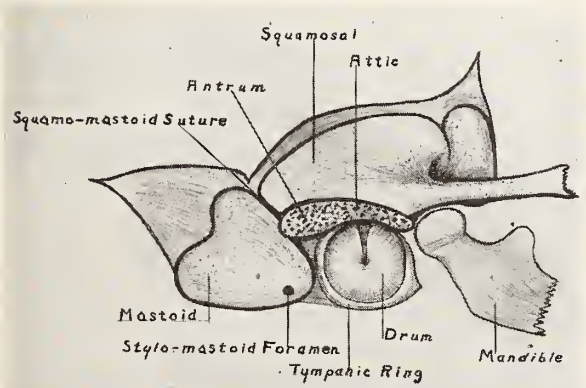

Chart I
Temporal Bone at Birth.

In the child the antrum is at a somewhat higher level than in adults and comparatively superficial and pus may easily escape to the surface or be evacuated. The suture between the post meatal part of the squamosal and the petro-mastoid disappears in the second year of life and so shuts off a possible route for the escape of pus to the surface. As age increases the depth of the sinus from the surface increases so that it varies in depth from 12 to 22 mm. in adults, the average being 16 mm.

Young maintains that some air cells are present at birth in the outer wall of the antrum. The mastoid process appears as a definite structure at the age of two years. During infancy there are two types of mastoid, one in which the bone is dense and persists in one per cent of adults, and another type in which the mastoid is diploetic and is retained in twenty per cent of cases.

ADULT'S MASTOID

In adults there are three types of mastoid, all about equally common: (1) Those in which the cells are large and communicate with one another and the antrum; (2) Those in which the central cells are large and communicate with the sinus while the peripheral are small and closed; and (3) Those in which all the cells are small and closed.

With these anatomical differences in mind, the following practical considerations may be pointed out: (1) In infants the external meatus is directed upwards and inwards, whereas in adults it is upwards and inwards in the cartilaginous portion and downwards and forwards in the bony portion. This is significant in the use of specula and in operations on the drum.

The presence of the mastoid at birth accounts for mastoiditis being common to all ages. The open petro-squamosal suture makes meningeal infection easily possible. The presence of the post meatal suture accounts for the presenting of pus subcutaneously and its occasional spontaneous evacuation. The thinness of the bone over the antrum renders operation a simple matter in children and also serves to caution us as to the superficial position of the facial nerve, which is always just as far from the surface as is the posterior antral wall. Remember that in children as Young suggests that a few air cells may be present in the outer wall and be overlooked as potential pus pockets.

GENERAL RELATIONS

With these suggestions and others which may occur to the more experienced otologists, let us pass to the consideration of the anatomical relations of the ear in general. From without in we shall consider:

(1) The External Meatus—The external opening of the meatus is elliptical with the long axis vertical thereby calling for elliptical speculae instead of round ones. In the cartilaginous part of the tube, sebaceous glands are numerous and are often the seat of very minute but very painful abscesses. In this region are the ceruminous glands that secrete the wax which, when excessive, forms the plugs which often obstruct the meatus and cause deafness, chronic coughs, yawning and sometimes sneezing and vomiting.

In the cartilaginous floor towards the tempero-mandibular joint are certain fissures—the fissures of Santorini. These permit easier movement of the cartilaginous meatus. It is through these gaps that pus may pass to the parotid from abscess in the meatus or in the reverse direction in parotid disease.

There are neither hairs nor glands in the bony meatus. Polypi may develop from the soft parts of the meatus. Exostoses are

common from the bony part developing at its junction with the cartilaginous segment and therefore some distance from the drum. The skin ,when inflamed, may produce an extensive muco-purulent discharge—otitis externa.

The relations of the external ear are of more than passing interest. The upper wall or roof of the meatus is separated from the cranial cavity by a dense layer of bone. Abscess or bone disease here may produce meningitis. I know of one case of meningitis resulting from the retention of a bean in the meatus. The anterior wall is in relation with the tempero-mandibular joint and parotid gland. The meatus moves with the joint and both have the same sensory nerve supply; as a result, in inflammation of the meatus, the jaw movement is painful, ana pain from an inflamed joint may be referred to the external meatus. This relationship also explains fracture of the anterior meatal wall from a blow on the chin. The relation to parotid infection has been mentioned. The posterior wall separates the meatus from the mastoid and 12 to 15 mm. behind the posterior wall is the lateral sinus. The floor is thick and substantial.

The blood supply of the pinna is abundant. We had one case of an ear being severed and when reapplied, healed in place. Due to the absence of fat the rich blood supply does not prevent frost bite and gangrene of the part. Haematoma are common here occuring between the skin and cartilage or pnder the perichondrium from blows upon the ear.

The nerve supply is significant. The pinna is supplied by the auriculo-temporal, a branch of the fifth; the lobule by the great auricular from the 2-3 cervical; the small occipital from 2-3 cervical supplies the posterior surface of the pinna; the vagus supplies the outer lower part of the meatus. Coughing, vomiting, yawning, and sneezing may be associated with ear affections: the yawning, coughing and vomiting resulting from irritation of the vagus and the sneezing from involvment of the fifth nerve.

Since the great auricular in its passage through the neck is in close proximity to the deep cervical lymph nodes and in the face passes through the parotid gland, inflammation of these structures may involve the nerve. Since it passes through between the cartilages and supplies the meatus, ear ache may result from lymph gland involvment. Since the lymph nodes of this area enlarge from infected teeth, tonsilitis, or skin infections, these should be examined in case of obscure earache. Since the lingual and dental nerves come from the same trunk of the fifth as does the auriculo-temporal, these structures should also be examined in pain in the external ear. The region around the tempero-mandibular joint also develops from the same gill arch as does the tongue and mandible so that tenderness in these areas may be associated with ear pains.

Ear rings to relieve eye affections have their anatomical connections explained by the fact that the fifth nerve (ophthalmic division) and the great auricular nerve make intimate connections in the cervical portion of the spinal cord. On this I do not desire to comment further.

Several cases of chronic coughs and obscure vomiting, have come to my notice in which the conditions cleared up when auricular irritation of Arnold's nerve had been removed by proper attention to the external auditory meatus.

(2) The tympanic membrane needs little comment. It may be worth noting that the radial connective tissue fibers in the membranous portion of the drum correspond in number and length with those of the basilar membrane, which, according to the Helmholtz theory of hearing, have a wave vibration corresponding to the various sound waves detected by the human ear. The membrana flacida which bridges the notch of Rivini lacks the two layers of connective tissue found in the parstensa of the drum. The membrana flacida consists of skin on the outside and mucous membrane on the inside. It is the seat of spontaneous rupture of the drum in of neglected otitis media and in cases of chronic otitis media with a discharge it becomes the seat of polypi.

Cunningham has called attention to the observation that in idiots, imbeciles, and feeble minded, the drum forms a right angle with the external meatus instead of an angle of 140 degrees with the roof as in the normal individual.

MIDDLE EAR

(3) The middle ear or tympanum is a mere slit in the petrous portion of the temporal bone placed in an oblique plane and contains the ossicles, chorda-tympani nerve, tensor tympani muscle and stapedius muscle; these structures are covered by mucous membrane and the cavity is lined with it. The distance from its outer to inner wall is from 1/12 to 1/6 inch. In its posterior wall is the facial nerve covered by a scale of bone so thin that inflammation can readily reach the nerve. The roof is very thin and separates the middle ear from the cranial cavity. In the young the petrosquamous suture is closed by a thin fenestrated membrane which permits commun-

ication between the middle ear and the middle cerebral fossa and thus favors the development of meningitis or cerebral abscess from otitis media. After one year the suture closes, but incorporates a portion of the primitive external jugular vein as the petro-squamous vein and thus provides an avenue for infection, thrombosis and cerebral abscess from middle ear infection.

The floor is narrow and its lowest part is below the level of the eustachian tube and the tympanic ring and therefore permits pus to collect and cannot be thoroughly drained either through the tube or through an opening in the drum. It is separated from the internal jugular vein behind and the internal carotid artery in front by a very thin plate of bone. Destructive changes in the middle ear have resulted in fatal hemorrhage from the internal carotid artery. In the floor of the middle ear are a number of folds of mucous membrane over stalagmite-like projections which form pockets in which pools of pus may collect. In the stalagmites and floor are tympanic air cells. These cells when infected, probably are the source of pus in the discharge in chronic otis media. Their removal would endanger the internal carotid artery and internal jugular vein as above indicated.

(4) The eustachian tube opens into the anterior wall of the middle ear. In adults its opening into the naso-pharynx is much lower than its distal end but in children it is more nearly horizontal, inclining at an angle of about ten degrees. This may be a factor in the frequency of otisis media in children. The cilia of the tube sweep towards the pharynx but in certain morbid and other conditions their movements are reversed and thus foreign material may be swept into the middle ear. The openings of the canal for the tensor tympani muscle, which lies in a canal above the tube and the least resistant portion of the tubal wall, is towards the retropharyngeal space, so that pus passing from the middle ear along these avenues usually presents behind the pharynx and forms a retropharyngeal abscess.

(5) Posterior to the middle ear is the mastoid antrum. It lies above and behind the external meatus and communicates with the middle ear in its attic through an opening called the aditus. The sinus is large enough to contain a small bean. It is surrounded by the mastoidal air cells which usually (in 66 per cent of the cases) communicate with it.

The structures surrounding it are:

(a) Above it is roofed by a thin plate of bone 2 mm. thick. This separates it from the temporal lobe and the middle cranial fossa. Small veins perforate this bone and join the petro-squamous vein in the remains of the petro-squamosal suture.

(b) On its inner wall where the antrum opens into the middle ear is the facial nerve and lateral semicircular canal. The facial nerve lies 14 to 22 mm. from the surface in the suprameatal triangle. The relation of the nerve and semicircular canal accounts for facial paralysis and dizziness in operations on the mastoid.

(c) Posteriorly the antrum is separated from the cerebellum and lateral sinus by a plate of bone 3 to 6 mm. thick and when eroded causes thrombosis of the lateral sinus or cerebellar abscess in mastoid disease.

(d) At its opening into the middle ear are located the incus, head of the malleus, and their ligaments. These structures may be involved in mastoid disease and require removal. Some of the veins of the mastoid air cells drain into the periosteal veins and thus account for the occurrence of edema and swelling behind the ear in mastoiditis. It is also to be remembered that emissary veins pass through the mastoid from the veins of the scalp to the lateral sinus. This accounts for thrombosis of the lateral sinus from scalp infections or from application of leeches. When thrombosis of the sinus occurs from infection through the emissary vein there is an associated tender area at the orifice of entrance of the vein.

The blood supply of the middle ear is from the internal maxillary, internal carotid, the petrosal from the middle miningeal, and the stylo mastoid artery from the posterior auricular. Some of the tympanic veins end in the superior petrosal sinus and the lateral sinus and thus account for thrombosis in these sinuses in disease of the middle ear. The petro-squamous vein already referred to crosses the roof of the middle ear and receives branches from the tympanic sinus and the attic and joins the lateral sinus posteriorly and the meningeal veins in front. Note the significance of this connection. By joining the lateral sinus posteriorly, thrombosis of that sinus may result, followed secondarily by cerebellar abscess or meningitis and by joining the meningeal veins anteriorly, meningitis may occur or abscess of the middle fossa may result.

The lymphatics of the middle ear—The lymph drains by two routes—one by way of the eustachian tube to the retropharyngeal nodes where retropharyngeal abscess may

occur; the other is to the posterior auricular nodes.

THE OSSEOUS LABYRINTH OR INTERNAL EAR

Infection from the middle ear may invade the inner ear by the exteranl semicircular canal; according to Scott and West, this is the most common route. It may erode the promontory on the medial wall and enter the cochlea, or it may enter by way of the fenestra ovalis to which the stapes is attached, or through the fenestra rotunda covered by the internal tympanic membrane.

Due to the function of the internal ear, invasion of it may produce two sets of symptoms. If the cochlea is involved disturbances of hearing and deafness result. If the saccule, utricle, or ampullae of the semicircular canals are involved, disturbances in balancing, co-ordination, vertigo, and vomiting result.

From the inner ear the infection has easy access through the perilymph system along the eighth nerve and internal meatus to the basilar cisterns of the subarachnoid space, or through the aqueductus vestibuli or acqueductus cochlea, or by perforation of the superior semicircular canal and thus reach the cranial contents. Sydney Scott maintains that nystagmus on moving the head following middle ear disease usually indicates a fistulous opening in the lateral semicircular canals.

Because of the symptoms accompanying vestibular disease and the functional tests employed in localizing them, it may not be out of place to discuss the central connections of the cochlear and vestibular nerves.

While the cochlear and vestibular nerves are conventionally described as the eighth cranial nerve yet they are anatomically and physiologically two distinct entities. The complete separation however, does not occur until they reach the side of the brain stem, at which point they separate to enter the medulla oblongata under the inferior cerebellar peduncle.

Fibers from the saccule and posterior semicircular canal course to the medulla with the cochlear nerve and there leave it to enter the medulla with the main trunk of the vestibular nerve. The failure to recognize this fact has led to the formulation of those diagnostic hypotheses based upon the idea that these fibers reach the cerebellum through the brachium pontis or middle peduncle, this is Barany's idea which is erroneous.

The fibers of the main trunk of the vestibular nerve have their peripheral endings in the saccule, utricle, and ampullae of the semicircular canals, and the ganglion located in the vestibule of the middle ear. Upon reaching the medulla some of the fibers probably pass direct to the cerebellum without relay. This can be appreciated when we recall that the cerebellum phylogentically and historically has developed from the vestibular nucleus in the medulla.

After reaching the brain stem the two nerves part company and from that point centrally are separate and distinct. The cochlear nerve enters at a lower level and somewhat more lateral than the vestibular. The fibers of the cochlear after entering the brain stem course to their several nuclei in the medulla, the superior olive and trapezoid nuclei in the lower pons region and there relay. After relaying some fibers cross to the oposite side, the majority of the fibers, however, ascend on the same side to higher levels. In their course through the brain step, reflex connections are made with the nuclei of the eye muscle and neck muscle mechanism of innervation, thus providing a reflex response between the turning of the head and eyes in response to sound.

The fibers in the acoustic path course in the lateral lemniscus (fillet). In the dorsum of the upper end of the mid brain the fibers relay in the inferior corpora quadrigeminal body and from there pass to the medial geniculate body and from there fibers pass to the temporal lobe by way of the auditory radiations of the internal capsule.

From these connections you will note that acoustic fibers from each ear reach the temporal lobes of both sides. Destruction therefore of one cochlea will cut off a part of the impulses from each temporal lobe; whereas destruction of one temporal lobe will result in partial deafness in both ears. Complete deafness must result therefore from injury to the acoustic nerve in the cochlea or before the fibers leave their nuclei. Central lesions at higher levels do not produce total deafness in one ear. A central lesion in the auditory pathway, if it can be measured it will be found to be greater on the side of the lesion. Brain stem lesions will be associated with loss of reflex response on the part of the eye and neck muscles to sound. Lesions above the mid brain would not involve these reflexes.

Since the cochlea apparatus developed in land animals after their ancestors left the water and began to respond to vibrations in air, and developed from the vestibular mechanism, I am inclined to the opinion that the cochlea is to a certain degree an equilibratory mechanism. This idea is supported by the histological and chemical identity of

the surface of the organ of Corti and the lining membrane of the semicircular canals.

While the cochlear or acoustic pathway is characterized by its direct connections with the cerebral cortex with only secondary reflex connections with the motor mechanism the Vestibular nerve is characterized by its intimate connections with the cerebellar motor mechanism and all the reflex motor pathways.

When the fibers of the vestibular nerve enter the medulla the fibers are distributed as follows: (1) Some fibers pass direct to the cerebullum without relaying; (2) others pass to the cerebellum after relaying in the medial vestibular nucleus, the nucleus of Schwalbe; (3) Some pass down the cord from the descending vestibular root nucleus; (4) Some pass to the nuclei of the third and fourth nerve nuclei of the midbrain from Deiter's nucleus and that of von Bechterew, from these latter nuclei fibers pass into the median longitudinal fasciculus and make connections with the somatic motor cranial nerves; (5) Reflex fibers make connection with the vagal nuclei and with the solitary fasciculus which connects all of the visceral nuclei. This is the pathway for the production of vertigo; (6) Commissural fibers cross the mid line from the vistibular nuclei and connect the cranial nerve nuclei of the opposite side; (7) A few fibers probably ascend to the thalamic region.

With such intimate and complex connections one can readily understand the difficulty encountered in attempting to localize central lesions in the vestibular pathway.

Without the intervention of cerebellum the vestibulo-spinal, the vestibulo-ocular and the vestibulo-vagal reflex pathways are capable anatomically and physioligically of producing the phenomena resulting from stimulation of the vestibular nerve. (pass pointing), staggering, nystagmus (eye deviation), vertigo, vomiting, may all result from head turning, heat, cold and electrical stimulation of the vestibular nerve without involving the cerebellum.

It is little wonder, therefore, that many hypotheses have been formulated to account for the various phenomena accompanying labyrinthine disease.

In differentiating between cerebellar and vestibular equilibratory disturbance the other functions of the cerebellum should be kept in mind. They are, in addition the maintenance of equilibrium, the regulation of muscle strength, muscle rhythm, and muscle tone. The drunken cerebellar gait is one of weakness. A drunken man's muscles are soft, weak and flabby, but the muscles of a man staggering from vestibular stimulation are hypertonic, over active, dysynergic due to over action, and they are rythmic, it is a condition of overstimulation with hypertonus. There is no doubt but that it is possible for sensations of vertigo in certain vestibular and cerebellar disturbance to pass to the cerebrum by way of or from the cerebellum by a cerebello-cerebral path. But disturbances of the semicircular canals can reach the vagal nuclei and vomiting centers by direct reflex connections in the medulla and the cerebral connections with the vagus account for the sensations reaching the field of consciousness. This is just as easy as it is for warm mustard water to produce the sensation of nausea through the sensory fibers of the glossopharyngeal.

Let us now examine these pathways by a reference to the chart. (Chart No. 2.).

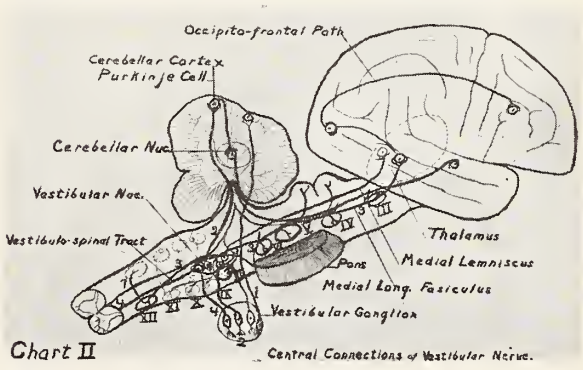

Chart II

Path 1; this pathway is from the vestibule to the cerebellum direct. Path 2 makes connections between the nuclei of the vestibular nerve and the cerebellum, a pathway a little more complicated than number one. Path 3 makes connections between the VI, IV, III nerve nuclei reflexly through the median longitudinal fasciculus. Path 4 makes reflex connections between the canals and the cord. In path 5 the fibers make reflex connections with the vagal nuclei and through the solitary fasciclulus with all the visceral centers in the brain and cervical cord. Through the connections in three fibers enter the median longitudinal faciculus and make connections with all the somatic cranial nerve nuclei, through paths 6 and 7. Commisural fibers connect the nuclei of the opposite side. See how complete are the motor reflex connections. (1) That connections are made with the cerebellum direct and indirectly, and (2) That no connections are made directly or remotely with the cerebrum.

As pointed out above, as a result of the reflex connections, stimulation of the vestibular apparatus can produce limb movements. For exmple, in slipping and falling

the hands go out automatically (reflexly) for protection. The sensations which afterwards reach the cerebrum are composite combining visual, and muscle-tendon-joint sensations and if you hit hard enough cutaneous sensations may enter the picture, but the muscles responded to the stimulus from the canals before you were conscious of your loss of equilibrium and dignity. This is over path four of the chart.

Stimulation of the canals can produce eye movements, the pathway is three of the chart. This is the mechanism of reflex nystagmus. Stimulation of the inner ear can produce vomiting, pathway five of the chart. Since all of these centers are connected directly with the cerebrum the sensations can readily reach the field of consciousness by the median lemniscus.

Since the vestibular apparatus is connected with the cerebellum directly and secondarily this structure may readily influence the end reactions in consciousness by modifying it by its functional properties. In the phenomenon of nystagmus the cerebellum overcomes the vestibular influence by its action in re-enforcing the voluntary impluses from the cerebrum. Just as soon as the cerebellum can do this the eye movements cease. The to and fro movement represents a struggle between these influences: A contest between cerebellum plus crebrum and the vestibular reflex mechanism. The former is purposive, the latter is not. If the strong stimuli continue to arrive from a diseased canal in which there is a progressive condition the higher centers are not able to overcome it. If the cerebellar connections are broken the cerebral assertiveness will be delayed and the movements will not be rhythmic.

If the disturbances are from cerebellar involvement they will be associated with the hypotonus and arythmia and stimulation of the canals will not exaggerate it.

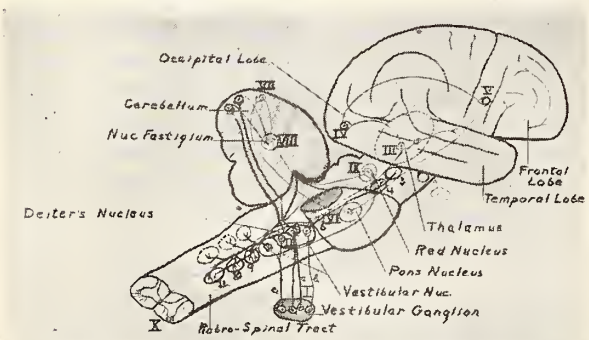

Chart III. Vestibular Syndrome Mechanism

The cerebellar-cerebral connections are represented in chart III; they are one and two and this path from the cerebellum to the thalamus, temporal, occipital and frontal lobes, the fronto-pontile path, the ponto-cerebellar path, to the cerebellar cortex, dentate nucleus, superior peduncle to the red nucleus, and then the rubro-spinal tract to the motor cells of the ventral horn of the cord . Cerevral connections are seen in Chart IV.

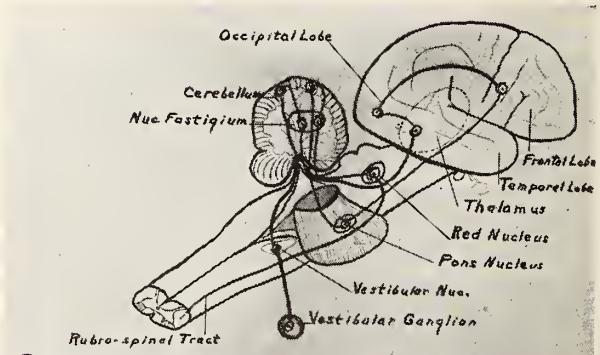

Chart IV. Vestibulo-Cerebello-Cerebral Connections.

Now let us consider the bearing of these connections on the signs, symptoms and tests associated with the diagnosis of disease of the oto-cerebellar mechanism. Normally, equilibration is dependent upon the eye, semicircular canals and muscles. Some othologists assert that any two of these structures can maintain equilibrium. With this I cannot agree, but would state it in this manner; a normally acting musculature plus normal eyes or normal labyrinth can maintain equilibrium.

In both instances the muscles are necessary.

With the anatomical connections in mind let us notice the differences between the reactions in cerebellar or central disturbances in equilibrium, and in peripheral or vestibular:

I. When the semicircular canals are not functioning, stimulation of them produces no nystagmus, no vertigo and no past-pointing. (Lesion in 1.) II. When stimulation of them produces vertigo, and no nystagmus and on past pointing the lesions is probably in Deiter's nucleus. (See chart III, tract a). The cerebellar connections are not intact. III. When stimulation produces no, vertigo, no past-pointing but nystagmus, the lesion is presumed to be in the interior cerebellar peduncle since past pointing is cortical but vertigo should result from vagal connections unless the association fibers from the vagus are cut off; this would indicate a lesion in the floor of the fourth ventricle which could also involve the peduncle. (Chart III, tract b). IV. When stimulation produces no nystagmus, but vertigo, past pointing and falling the lesion has cut off the impulses to the median longitudinal fasciculus above the nucleus. V. When stimuli produces nystagmus but no past pointing, no falling and no vertigo, it means the lesion

has involved the portions of the nucleus that gives relays to the vagal nuclei and the cerebellum, and the lesion is not in the superior, middle and inferior cerebellar peduncles, as Barnay and Fischer suggest.

These men try to isolate the lesion point between the vertical and horizontal canals. This cannot be done because Barany assumes (does not prove) that fibers from the vertical canals enter the pons and then pass to the cerebellum by way of the middle peduncle. He has assumed that the fibers which we have mentioned as running with the acoustic portion of the eighth nerve enter the Pons with that nerve, which they do not. All of the fibers from the utricle, saccule, and ampullae have been demonstrated experimentally to enter the vestibular nucleus in the medulla except those which go direct to the cerebellum and these also pass through the inferior peduncle.

Aside from the purely anatomical and physiological facts there are associated conditions which assist in differentiation between cerebellar and vestibular disturbances. Vestibular disturbances are associated with deafness and increase with disturbances of the canals, and the longer the conditions exist, the less noticeable they become either due to loss of vestibular function or the complete usurpation of control by the voluntary pryamidal tract emanating from the cerebrum and assisted by the cerebellum.

Cerebellar disturbances are not aggravated by vestibular stimulation, they grow worse as the condition progresses, they are associated with weakness, incoordination, diadokokinesia and other manifestations of loss of cerebellar function. Cerebellar nystagmus is less apt to be horizontal and rotary but up and down, oblique or towards the side of the lesion. Closing of the eyes has no effect upon the vertigo or gait. Caloric tests reveal a normal labyrinth.

From a cursory survey of the literature I am convinced that a more thorough knowledge of the anatomy and function of the central nervous system and especially the central connections of the cranial nerves would result in a more lucid statement of labyrinthine symptoms than you at present possess.

NOSE

I have purposely dwelt at length upon the ear because it is the most complicated mechanism included in your specialties. The few remaining minutes we shall devote to the nose since the eye is too large a subject to take up in so brief a time for discussion as is at our disposal.

First let us note the peculiarities of the nose of the child. In the adult the inferior meatus is large and is the chief respiratory passage; in the young child before the superior alveolar ridges develop it is very small and the middle meatus is the chief respiratory way.

The nasal cavities grow rapidly from the sixth to the eighteenth years of life during the period of permanent dentition. At the same time the maxillary sinus is developing and increase in the vertical height of the nose is taking place as a result. This increase in the cavity of the nose is confined to its maxillary or lower portion.

The normal development of the nose and paranasal sinuses is dependent upon the normal respiratory tide. Mal-development results when the respiratory passages of the nose are obstructed by adenoids or other impediments.

In early childhood the frontal sinus is rudimentary. At about the sixth year the rudimentary bud of mucous membrane which has been present at the upper extremity of the hiatus semilunaris begins to push itself into the diploetic portion of the frontal bone. It is fully developed at twenty-five. For this reason children are not affected by frontal sinusitis until after they begin their second dentition. The sphenoidal and ethmoidal sinuses begin to develop at the same time as the frontal. The maxillary sinus (antrum of Highmore) is present at birth, but reaches its greatest development in old age after the alveolar ridges have partially absorbed. The walls of the antrum of Highmore are thicker in children than in adults.

Returning to a general consideration of the nose, it is to be remarked in passing that the skin of the nose is closely adherent over the cartilaginous portion so that inflammation here produces a tension and severe pain; the engorgement produced being due to the rich blood supply. The blood supply at the muco-cutaneous border is terminal and therefore favors congestion. This is true in all such localities as for example at the anal and esophageal opening where piles occur.

The great number of sebaceous glands over the cartilaginous portion of the nose renders it a most favorable location for acne. "Acne-hypertrophica" appears here and produces the appearance described by the English as "grog blossoms." Because of the abundant blood supply, the nose lends itself readily to plastic operations. The nose has been completely severed and when replaced has healed.

The skin over the root of the nose, the alae, and interior of the nose receive their sensory nerve supply from the ophthalmic division of the fifth. This accounts for lacrimation from painful affections of these parts and also

sneezing from bright lights striking the retina.

The cartilaginous portion of the nose is often destroyed by lupus or syphilitic ulceration. Dilating speculae should never be passed beyond the cartilaginous portion of the nose.

The naris is about 1¼ inches in vertical height and a little less transversely, at its widest part. In the posterior nares one can palpate with the finger all the structures seen with a rhinoscopic mirror. The floor of the nose is wider in its middle than elsewhere and the vertical extent is greatest there. For this reason forceps should be opened in a vertical direction.

The superior turbinate is 2 mm. from the septum, and the inferior is 4 to 5 mm. from it. Above the middle turbinate the cavity is so narrow as to be regarded as the surgical roof of the nose. The anatomical roof is formed by the cribiform plate of the ethmoid and measures about 1/6 inch in width. Because of its narrowness it is not apt to be penetrated by forceps of any size. The brain has been penetrated by objects passing through the roof of the nose and the London Hospital reports give the case of a man who ran the ferrule of an umbrella through the nose into the Pons, came to the hospital unassisted, and died several days later. It had passed through the sphenoidal sinus. The peri-neural and peri-vascular lypmh-spaces drain into the subarachnoid space so that infection has free passage from the nose to the sub-arachnoid space. It might be of interest to observe whether rhinitis of the olfactory region with loss of smell more frequently results in meningitis than infections in the respiratory region of the nose.

Meningoveles may protrude from the roof of the nose and in case of cleft palate have presented in the mouth. Their excision here has resulted in death from secondary meningeal infection.

The septum in adults is rarely straight; 76 per cent of them deviate. The French claim that because of the almost universal septal deviation that the nose is rarely straight. They account for the deviation by the practice of always blowing the nose with the same hand.

On the outer wall in the inferior meatus opens the lacrimal duct. It is guarded by the valve of Hasner which prevents inflation of the lacrimal sac from the nose.

The inferior meatus is below the level of the vestibule, therefore catheters unless tilted upon insertion will pass through the middle meatus. The inferior turbinate is about ¾ inch above the floor. The superior meatus is short and narrow. The middle meatus opens up widely in front. Upon the lateral wall of the middle meatus is a deep groove, the hiatus semilunaris. It runs from above downwards and backwards. Into its superior end opens the infundibulum from the frontal sinus and into its lower end the maxillary sinus opens. The anterior and middle ethmoidal cells may open into the hiatus, or into the infundibulm or directly into the middle meatus. The accessory opening of the maxillary sinus, the ostium maxillaris, when present, opens below the hiatus. The upper limit of the hiatus is formed by the bulla and into the bulla the middle ethmoidal cells open above the hiatus.

The floor of the nose slopes from before backwards.

The nasal mucous membrane in the respiratory portion is ciliated columnar epithelium. It is very thick and vascular over the turbinates, except the superior, and on the lower portion of the septum. On the floor and between the turbinates it is much thinner. There are myriads of glands over the turbinates and septum in their posterior and lower portions. These are subject to extensive hypertrophy and their secretions may be mistaken for cerebro-spinal fluid.

The mucous membrane is rich in lymphoid or adenoid tissue. Beneath the mucous membrane of the posterior portion of the inferior turbinate is a rich plexus of veins so large that it is sometimes called the turbinate body. When these vessels become engorged the cushion swells and obliterates the respiratory passage, between the inferior and turbinate and septum.

The turbinates warm the air and filter out dust and floating particles probably including bacteria.

The arterial blood supply to the nose is from the internal maxillary, ophthalmic and facial arteries. The venous supply is of practical significance: (1) The ethmoidal veins enter the opthalmic and thereby drain into the lateral sinus. (2) Through the foramen cecum in children and in some adults there is an emissary vein from the nasal mucous membrane to the superior longitudinal sinus. Bleeding from the nose in children in cerebral congestions, as in fits of anger, may be through this vein. It serves as a safety valve and in the age of appoplexy this vein if present may function with beneficial results to the victim. All of these veins form an avenue for infection to travel from the nose to the intra-cranial regions.

The vascularity of the mucous membrane, its laxity and the poor support given the blood vessels and large plexuses account for the frequency and obstinacy of epistaxis in venous stasis due to tumors of the neck pressing on the large veins or from paroxysmal coughing.

The value of elevating the arms from the sides of the chest in nose bleed is accounted for by the fact that it aids aspiration of the venous blood into the throax.

Often the bleeding point is on the septum one-half inch above and behind the nasal spine.

Cough and bronchial asthma may be explained anatomically by the connections between the sensory nerves of the inferior concha and the vagal centers in the medulla. Often cauterization of the turbinate cushion relieves distressing conditions.

In the upper third of the nose is the pale olfactory mucous membrane. This is the reason for sniffing in attempting to detect faint odors. In doing so the nostrils dilate. The dilation is effected through the facial nerve. For this reason impairment of smell often results from facial paralysis without involvement of the olfactory nerve.

The olfactory nerves pass through the cribiform plate and the olfactory bulb rests upon the plate. Therefore fractures through the middle fossae usually injure these structures, with resulting loss of smell.

Your attention was called to the drainage of lymph from the upper part of the nose into the subarachnoid space. Lymph from the lower portions of the nose drains into the retropharyngeal nodes, therefore in diseases of the nose palpate the pharyngeal walls through the oral pharynx in examining the lymph glands. The cervical nodes are not involved as in disease of the tonsils, teeth and eyelids.

With a few more words about the paranasal sinuses let us remark that in the London Hospital reports, over 15 per cent of all subjects examined post mortem showed disease of one or more of the sinuses. Sir St. Clair Thomson estimates that the sphenoidal sinus is diseased in over 30 per cent of the aged. The total capacity of the ethmoidal, sphenoidal, maxillary and frontal sinuses is more than twice that of the nasal cavities.

Our personal view of their functions is: (1) To add size and strength to the bones of the skull with minimum weight; (2) To provide resonating chambers; (3) Aerate the bones of the skull; (4) Probably, according to Dr. Jas. Adam, to warm and moisten the inspired air.

The frontal sinus is very variable in size, extent and shape. Our observations on over 1,000 cadavers in the dissecting room lead us to the conclusion that in from 40 to 60 per cent of individuals the frontal sinus extends over the orbit, causing a double orbital plate of the frontal bone. In over 50 per cent of the cases it extends further up into the forehead region of the skull than is usually stated in text books.

The duct from the sinus is ¾ inches long; it runs obliquely backwards and downwards. We do not believe that the rhinologist can probe the sinus through the duct. The frontal duct joins the bulla and the openings from the ethmoidal cells so that by breaking down the bulla and the anterior ethmoidal cells the operator can facilitate the emptying of the infundibulum. The duct is often torturous and in these cases it has to be opened from the inner end of the superior border of the orbit. It may empty its contests into the hiatus and fill up the antrum of Highmore and make of it a cesspool for chronic discharges from the frontal sinus.

The structures in relation to the sphenoidal sinus are:

(1) Cavernous sinus and its contents; (2) Internal carotid artery; (3) Optic nerve; (4) Maxillary division of the fifth nerve; (5) the pituitary body on its roof. The veins of this sinus join the ethmoidal and drain through the ophthalmic into the cavernous sinus, and so make a possible route of infection.

The maxillary sinus (antrum of Highmore) is so situated that tumors from it may grow (1) through the thin roof into the orbital cavity; (2) through its thin lateral wall into the nose; (3) into the cheek; (4) occasionally into the spheno-maxillary fossa. The infra-orbital and anterior and middle superior alveolar nerves pass through in the inner side of the antrum so that tumors and inflammation in it may involve these and produce facial neuralgia, or tooth ache.

The only rational place to open the antrum is through the canine fossa unless the second or third molars are decayed, when their sockets make a good place for drainage. Its opening into the nose is on a level with its roof and its floor is below the level of the palate. For this reason it cannot be satisfactorily drained through the lateral wall of the nose as some surgeons insist and as is being taught in some of our schools even now. The results obtained by some recent graduates in draining the antrum justify the foregoing remarks.

EMISSARY VEINS

In closing let us call your attention to the system of emissary veins in the skull and the peculiarity of the physiology of the venous circulation in the head and its significance.

Attention has been called to the mastoid emissary vein, the petro-squamous vein from the middle ear and mastoid, the nasal joining the ethmoidal and entering the ophthalmic and eventually emptying into the cavernous sinus, and the connection between the nasal and superior longitudinal sinus through the foramen cecum in children and in some adults.

There are usually one or two parietal emissary veins which communicate with the veins of the scalp on the outside and the meningeal on the inside of the skull; there are also two through the occipital bone. These can and often do convey infection from the scalp to the meninges.

There are emissary connections through the foramen magnum of similar arrangement and significance to the former.

The two most important connections aside from those already mentioned are (1) The facial (angular) vein at the inner angle of the orbit which anastomoses with the ophthalmic. Through it infections from the front of the face and eye region can pass to the cavernous sinus. Many fatal cases of meningitis, cerebral abscess and thrombosis have resulted from such a simple thing as a pimple below the eye because of this avenue of infection.

The veins in the masseteric and temple regions on the side of the face make connections with the venous pterygoid plexus which lies on the pterygoid muscles in the maxillary fossa. This plexus communicates freely by way of the middle foramen lacerum by means of emissary veins with the cavernous sinus. So that infections from the temple and side of the face can readily reach the cavernous sinus and produce thrombosis, abscess and meningitis.

There are a few less important emissary veins which we shall omit.

The reason for the great part these veins play in conveying infection from the surface to the cranial cavity is understood when we recall the effect of respiration upon the flow of the venous blood in the skull and neck. The surface veins, facial, ptergoid, nasal, mastoid, occipital etc., are under atmospheric pressure and drain into the external jugular which is also influenced by atmospheric pressure. The internal jugular is under the deep cervical fascia and due to its arrangement and the action of the omo-hyoid muscle this vein is not affected by atmospheric pressure. On inspiration a negative pressure (intrathoracic) is produced in the internal jugular so that the blood in the sinuses of the skull is sucked (aspirated) into the throax. This results in a lower venous pressure in the lateral, cavernous, superior longitudinal and other venous sinuses than exists in the veins outside the skull, the result is therefore that the blood current in these surface veins is directed to the sinuses within the skull. This condition results in fascilitating the passage of infective material from the surface to the meninges and the brain.

INDUSTRIAL MEDICINE

A. M. SHAEFFER, M. D.
JACKSON, MICH.

Francis Bacon said, "The poets did well to conjoin music and medicine because the office of medicine is but to tune the curious harp of man's body." In all ages music has been credited with a potent influence. Gideon conquered the Midianites with the blare of trumpets. The medicine man of the American Indian tribes employed musical instruments as an important part of his medical outfit.

However, before prescribing music as a soothing agent to an employee in a factory, the industrial physician must be certain of his prescription. Otherwise he might find himself in the predicament of the doctor who attempted to treat an employee of a melancholic turn of mind. The doctor told him to be optimistic and whistle at his work. Imagine the chagrin of this physician when the man replied, "Doctor, I can't, I'm a glass blower."

The conservation of life and limb of those gainfully employed and the reclamation of those disabled in the industrial world have become a definite program in which we are mutually interested. Statistics of the last few years show that among a large group of industrial wage earners, industrial hazards were responsible for only one-quarter of the total accidental deaths, while the remaining three-quarters were caused by public and home accidents. This is significant and should interest us in a program of prevention of accidents and minimizing health hazards outside of as well as in the industrial world. The humanizing influence of this work is far reaching in contributing to the health, comfort and contentment of the working force and their families.

The human machine is without question the oldest as well as the most intricate machine in industry. From the earliest to the most recent record of man, the destructive agencies of nature such as fatigue, infections, accidents and unhygenic surroundings have decreased his efficiency and robbed him of happiness. In more recent times, when expensive and complicated machines have been used, they have been studied in order to preserve their mechanism and obtain maximum efficiency. Until very recently the human machine was neglected. Inventors have devised miraculous machines to do seemingly impossible operations. Yet men must direct and operate these highly specialized machines. If the man power ceases to work the machines cease production. Today the service rendered by the

industrial physician reflects its importance by keeping the employees fit so they can produce one hundred per cent efficient work and in aiding the management to declare profitable dividends for their stockholders.

The human body is estimated as having more than twenty-six trillion cells. The normal life cycle has three phases, development, maturity and decline. Each of the first two phases lasts about thirty years and the third should be at least of equal length. We find individuals in all three phases of life engaged in industrial pursuits. The prevention of sickness, accidents and inefficiency in any portion of the life span of the employee is the purpose of health supervision. The factory hand of today may be the executive in the office tomorrow. Many captains of industry have risen from the ranks.

It is estimated that there are forty-two million people gainfully employed in the United States today. We have fifteen thousand wage earners in Jackson. This huge army of working people to which Jackson contributes her quota is vitally affected by eliminating accidents and health hazards. In the World War, especially designed machinery was used for killing and wounding carefully picked strong bodied men. Yet the actual killing of the United States soldiers only slightly exceeded the number killed in industrial plants in the same period. Think of it! In the World War our casualties amounted to approximately 70,000, and in the same period we lost, through industrial accidents and health hazards, about the same number of men. In other words, our enemies found it difficult to destroy as many lives as we sacrificed in our factories.

Let me bring it closer home. We have 15,000 industrial wage earners in Jackson today. If the deaths and injuries in the industrial world should be equally distributed, fifty Jackson men would die within the year from their own carelessness or from the carelessness of somebody else. In this list of fifty no doubt some of you will find somebody in whom you are vitally interested. Keep in mind I am only speaking of deaths due to carelessness. I have not mentioned those injured and recovered. I have said nothing of those suffering from disease contracted from a fellow worker, or some other form of hazard connected with industry.

We ought not to have this sacrifice of men, we do not want it and we have the power to prevent it. The army demonstrated the value of periodic physical examinations. Periodic physical examinations of industrial workers have been found to be a factor in saving one-half the premature destruction and preventing an economic loss of untold millions of dollars. One of our large insurance companies has made careful physical examinations, pointing out physical impairments and advising their employees. In ten years there was a material reduction in mortality in each and every decade of life. Between the ages of 50 and 60 there was a saving of 53 per cent in expected mortality. In no decade was the saving less than 15 per cent.

These figures show that a periodic health examination of individuals, whether they are industrially employed or not, is a definite, practical, common sense way to forestall disease and suffering. Not only a longer life, but what is equally important, a more useful, a happier and healthier life results.

Our industries have noted the need of physical examination and health education. They are enlisting medical aid in the application of available scientific information. Industrial medicine has shown that the death rate in industry is no more a constant figure than the death rate was constant in countries having yellow fever and malaria prior to the control of the disease carrying mosquito. In the past there was a haphazard method of sizing up new employees, classifying them and assigning them to various jobs. Today there is a careful study of the various occupations and their requirements and the applicants are examined with these requirements in view.

Protection to the eyes of workers illustrate this. The eye conservation work is an outstanding factor in industrial safety. Industrial accidents are responsible for an injury to the human eye every two and one-half minutes, day and night, three hundred and sixty-five days in the year. Ten people from the 15,000 Jackson wage earners have reported today to the medical departments of their industrial plants for eye treatment, necessitated by some industrial hazard such as flying steel, emery, or other foreign particles. Much has been done to alleviate the eye accidents in industry. Protective goggles are provided by practically all plants. These goggles are so constructed that the lenses do not fly into pieces if broken by a flying chip of steel, as ordinary glasses do. But too many workmen still wear their goggles in their pockets except when they are watched. There are still too many instances where toothpicks, matches, handkerchiefs, pocket knives and even tongues of workmen are the instruments employed to remove cinders and other particles from the eyes of fellow workers.

Many cases of defective vision of one eye of industrial workers are brought to their

attention the very first time when they are examined with relation to visual requirements of the work they are to do. We recall one case in which almost total blindness of an eye was discovered when a cinder was removed from it. This worker had undoubtedly been almost blind in this eye for years. By suitable glasses and eye exercises his vision was greatly improved. It is a simple proposition to find out whether a man has good eye sight or not. All we have to do is to put him at a standard distance away from a standard test card and see if he can read it. If his standard is very low, we look into his case further before placing him on the job he applied for. There are two reasons for this. If he has a very low vision, sooner or later, he will have an accident because of poor eye sight, and the employer is going to lose a lot of time and incidentally pay for the injury. It is just plain ordinary humanity to find out whether the man can see enough to do the work.

About two-thirds of the industrial accidents are due to lack of organization and educational methods, while one-third is due to lack of mechanical guards or equipment. So the bigger problem is to reach the new employee and get him interested in himself. We have in one of our local factories a blind man who was taught to operate a drill press three years ago. Since then he has efficiently operated it and has never had an accident of any kind. The industrial physician knows that an ounce of prevention is worth a pound of cure. The A, B, C of industrial medicine is "Always be careful." One case of blood poison costs more than all the time expended in urging employees to keep small injuries cleaned and properly dressed.

The medical organization with which I am associated cares for a large number of local accidents each year. Something over five thousand surgical dressings are required. Monday used to have more accidents than any other day in the week. That changed when prohibition went into effect. That is another good argument in support of prohibition.

It is true that the new employee in the first month is six times more liable to accidents than the older employee. So anything which prevents labor turnover, prevents accidents. The physician interested in industrial medicine comes in most intimate contact with the problems of prevention of human suffering and physical failure. He sees the need of a thorough and critical analysis of the human body before a general breakdown occurs. How much better is the early detection of the abnormal and the diplomatic correction of these faults before there is time to label a permanent defect and classify the advanced disease. It is far better and easier to prevent a disease than it is to cure it, even though it be less spectacular.

The prevention of epidemic diseases such as small pox, typhoid fever, scarlet fever, etc., increases the safety and the production of the personnel of an industry. The pointing out of existing tuberculosis in any employee may be the saving of a human life, a commodity which cannot be replaced. Those industrially employed are benefited by occasional rest periods during work hours, the breaking of monotony and the lessening of fatigue in certain work. The observation of various factors, such as first aid medical attention, ventilation, light, cleanliness, lunch rooms, etc., all come in the domain of industrial medicine.

But achievement imposes obligation. The progress made by industrial medicine in keeping employees efficient, contented and always on the job, is gratifying. This service has safeguarded the employer as well as the employee. But the most gratifying feature of all is the vision that it brings of future progress. Humanity in other fields of endeavor will see and feel the benefits derived from this service and will use this knowledge for its own benefit. And the greatest benefit will be the common understanding that the welfare of one class of humanity is the welfare of all.

TREATMENT OF ADVANCED CANCER OF THE UTERUS WITH HEAT AND "STARVATION LIGATURE"*

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Carcinoma is more vulnerable to the application of heat than to any other known agent. One difficulty with heat in the treatment of cancer has always been a lack in knowledge of how most effectively to obtain from its employment, the maximum benefits. At present there are two methods by which heat can be applied effectively to cancer invaded tissues; one, the cautery, the more familiar procedures with which are the basis for whatever recognition it has received in the past in the treatment of this disease, the other is the method under discussion in this paper, the continuous application of low degrees of heat, temperature to be continued for one or two hours at a point less than required to produce actual

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cauterization of tissue. It is particularly applicable to treatment of carcinoma of the cervix. The heat should be so applied as to be destructive only in a minimum degree to normal tissues, acting in the greatest measure as a destroyer of cancer cells in any portion of the birth tract. With the apparatus devised by James F. Percy, the heat is easily regulated and controlled. So applied, its advantages over Radium and X-ray are its simplicity, its freedom from danger as well as the comparative cheapness of the required apparatus. Its use is not followed by radiation sickness, and I have had cases with the uterus absolutely fixed in the pelvis, in which at the end of one heat treatment the uterus was rendered movable; thus changing immediately a mechanically inoperable condition into an operable one. Whereas the radiation sickness which follows X-ray or radium, delays operation and is rapidly followed by new connective tissue formation in the parametrium with decreasing mobility of the uterus, thus increasing mechanically operative difficulties. Furthermore, heat is disseminated by conduction rather than by radiation and is therefore absolutely controllable. This, coupled with the fact that the thermal resistance points of normal and malignant cells, being much further separated than with other agents, X-ray and radium, makes heat the logical method of choice.

We will now turn from the consideration of heat to the "starvation treatment" which is today an established procedure in the treatment of advanced cancer of the uterus. It consists in ligation of the internal iliacs, the ovarians, and where deemed necessary, the mediosacral arteries. The ligation is applied to lessen the nutrition of inoperable new growths, thus checking their further development and often causing their disappearance. The use of the "starvation ligature" mechanically accomplishes instantly in the blood supply what a study of a microscopic specimen of carcinoma shows nature is endeavoring to accomplish. Immediately upon ligation of the above named arteries, one can observe definite blanching of the uterus and its adjacent structures.

Since the malignant cells are five times more vulnerable to heat than normal cells, it is therefore not hard to see that in cutting down the blood supply by ligature, still further lessening it by sealing the smaller vessels with heat, and also, through the heat producing an increase of connective tissue which further protects against the ingress of the malignant cells; we may destroy them, and yet have sufficient collateral circulation maintained to nourish the normal cells. Then, too, if not supplemented by the "starvation ligature," radiotherapy often fails to destroy malignant cells whose nests are in or near the large three coated blood vessels from which they draw sufficient nourishment to withstand its effect. Again, the "starvation ligature" so slows the blood stream that the cooling effect, which it normally has is destroyed, thus enhancing the value of the heat treatment because the cancer cells in the arterial wall are now just as vulnerable to heat as cells located elsewhere. Five years ago, I first used this method of treating advanced cancer of the uterus; using heat as above described, combined with the "starvation ligature," also removing any enlarged post peritoneal lymph glands found between the receptaculum chyli and the obturator foramen. In accordance with Beatson's theory of the presumptive influence of ovarian irritation upon the cancer growth, the tubes and ovaries are removed when consent is obtained. A further advantage in double oophorectomy and salpingectomy is the extension of the area of lymphatic block. Another advantage in the use of heat in conjunction with "starvation ligature" over X-ray and radium is that in young women, where the patient so demands, the menstrual cycle can be preserved. Whereas, when X-ray or radium is employed, the patient is sterilized and the menses cease. A case in point.

Case No. 632-C. Housewife, age 28, weight 165 pounds, nullipara, denies ever having been pregnant, and has never been ill. Cause for consultation: First noticed bleeding five years ago. It is accompanied by pain. At first patient noticed a spot of blood on clothing, only occasionally, three or four times a month, with some discharge before her period; this has gradually progressed. About a month ago she took a great deal of exercise, walking, climbing hills, and bathing daily, which seemed to make her bleeding worse. She has worn napkins daily for the past month. For the last two months she has had a yellowish discharge, mixed with blood and pus, attended by a foul odor. Vaginal examination reveals an extensive fungus mass bleeding readily. Clinical diagnosis: Advanced carcinoma of uterine cervix. Diagnosis by pathologist, from currettings: Medullary, basal celled type of carcinoma of the cervix uteri, actively growing. Consultation: Diagnosis concurred in and advised by consultant to abstain from operation, as case is hopeless. Operation, August 16, 1920. Percy heat was employed, coupled with ligation of both iliacs and both ovaries. Patient left hospital during third week after an uneventful recovery. Though no bleeding ever occurred after this operation, there was a small area about the cervical canal which was slow in clearing up. One radium treatment promptly disposed of this. I saw her in my office one week ago today. She is perfectly well. Patient now weighs 190 pounds, having gained 25 pounds since the operation. The cervix is healthy and she menstruates normally and regularly three days in each month.

The heat and "starvation ligature" treatment is particularly indicated in that unfortunately large number of so called in-

operable and incurable cases of cancer of the uterus where there is an extension of induration into the vaginal or rectal wall or both, the uterus fixed and often a sloughing, bleeding, putrid mass stretching and filling the vagina.

The advantages of the method:

(1) Controlling hemorrhage. (a) Immediate. (b). Remote.

(2) Checking extension of malignant growth.

(3) Mitigating physical pain and mental suffering.

(4) Diminishing absorption of poisonous products.

(5) Facilitating the discharge of pus and necrotic tissue.

(6) Permitting the application of other surgical and non-surgical measures.

(7) Giving a psychic adjuvant to the physical measures employed.

(8) Preserving the menstrual cycle in young women when desired.

(9) As a preliminary to any form of treatment of cancer of the uterus; whether X-ray or radium or a contemplated panhysterectomy.

This leads me to repeat that the use of heat and "starvation ligature" should precede a contemplated panhysterectomy; and to add, that while I do not want to be misunderstood as decrying the use of X-ray and radium in the treatment of advanced carcinoma of the cervix as useful postoperative adjuvants, they should, however, never in my opinion be used as preoperative measures, and if X-ray or radium is to be employed in preference to heat, their value will be enhanced by antedating the procedure by the use of the "starvation ligature."

From a series of eighteen patients, the youngest 28, the oldest 56, with an average age of 43, there was no immediate mortality. Of these, every one showed improvement locally. One died later of sepsis. One, on whom ligation was not done, but heat used following incomplete operation, improved locally and in general health, until later, when against our advice radium was employed. This incidentally was immediately followed by extension of the growth. Eleven of the eighteen patients or 61 per cent, are living. In six of the eighteen, or 33 per cent, operation is too recent to draw any conclusions except to say that one of the six has shown no improvement in her general condition, although locally her symptoms are improved, in that bleeding, discharge and odor are almost nil. Of the other twelve cases, all but one for a time showed improvement both locally and in general health. One has been lost track of, six have died, the time averaging nineteen months. Five, or 28 per cent, are alive and well, with no subjective or objective evidence of return. Of these, the shortest time of apparent cure is one year and ten months; the longest three years and seven months, with an average of two years and nine months.

Before closing, I want to add a word regarding the apparent destruction of the cervix by a malignant growth, and its complete restoration in normal looks and appearance, after the carcinoma was destroyed by heat. In several of my cases where the carcinoma involved the cervix and utero-cervical junction, there has been a complete restoration of the cervix to normal appearance and in at least one of the series, the menstrual cycle was maintained.

Please remember that these patients were submitted to the heat and "starvation ligature" treatment because, from a clinical standpoint, they were considered otherwise of the utterly inoperable type. I am more than convinced that over any other form of treatment, it has not only the advantage of a low primary mortality, but in addition a largely increased percentage of lives are greatly prolonged in comfort, with freedom from hemorrhage, exhaustive and offensive discharge, and mental distress. More than this, there is an appreciable number of symptomatic cures extending over a period of years.

Surely, if no permanent cure has been effected, the relief from symptoms and prolongation of life has made this work abundantly worth while.

Finally, the principles that I am trying to reveal are that,

(1) Cancer abhors heat.

(2) By proper ligaturing, cancer can be starved without destroying normal tissues.

(3) By combining the two methods, results will be uniformly better.

INTRATHORACIC GOITRE

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INTRODUCTION

Intrathoracic goitre is not a disease entity any more than other enlargements of waywardly placed thyroid tissue, as the sublingual goitre, submaxillary goitre, or upper cervical goitre, but it has such important relationship to vital organs in its location in the mediastinum, and the recognition with the differential diagnosis is of such vital significance that we are permitted to discuss it as an entity. As you are well aware, I have previously tabulated, and published a study of the necks and the incidence of goitre in some twenty-two

hundred persons in our district, and we all know that the prevalence of goitre obtains in nearly the same proportions throughout the greater portion of the upper peninsula. Therefore, in the goitre belt, it behooves us to be on guard for this condition. I feel that intrathoracic goitre occurs more frequently amongst our thousands of goitre patients than has been recognized. Crotti, with his Kocher experience, gives 25 to 35 per cent of all goitres deep into the upper thorax and 15 to 18 per cent he considers totally or partially intrathoracic, while Hertzler gives only ¼ of 1 per cent as the latter proportion.

In my own experience, based upon the examination of thousands of necks, pre-operative and post-operative, about 20 per cent I found to be deep in the upper thorax and about 3 per cent were so deeply located as to be classed as intrathoracic.

Crotti's and Hertzler's excellent articles on this subject can well be carefully studied to great advantage.

Intrathoracic goitre is one that lies in the thorax. Kocher describes ptoses of the cervical organs and mentions thyroptosis as a dropping down of the whole gland and isthmoptosis of Kreuzfuchs as a dropping down of only the isthmus. The portion in the upper chest may contain extension of both lobes, (double intrathoracic goitre), or the original thyroid gland. They are called deep goitres when the cervical goitres dip into the upper chest behind the manubrium sterni; partial intrathoracic goitres are those that have their greater portion beneath the sterum, and totally intrathoracic goitres are those that are totally in the mediastinum.

The human thyroid apparatus commences in the embryo as an evagination from the anterior portion of the pharyngeal wall in the posterior juncture of the three divisions of the tongue, (later the foramen caecum). Therefore, it is primarily a bud of the digestive tube—(the tuberculum impar of His),—proceeding down the neck as a set of cells, not a fusion of two lateral lobes, at the level of the second bronchial arch and the first aortic arch. It is the aortic arch portion that may carry with it an accessory thyroid gland into the mediastinum that eventually grows into a pure intrathoracic goitre.

So the latter may be an accessory thyroid gland goitre or an extension of the originally located thyroid gland.

When the totally intrathoracic goitre is not impacted and small enough to arise on coughing and deep swallowing, it may be a "plunging goitre" of the earlier authors.

The condition under discussion is more common in the males, according to Crotti, on account of the heavy lifting and the larger chests of this sex. Youths occasionally present themselves with intrathoracic goitres and they may also be present in the new born. In rare instances the mediastinal goitre may be congenital, but it usually appears first about the fortieth year.

PATHOLOGICAL ANATOMY AND RELATIONSHIP TO OTHER ORGANS

The pathological anatomy of the thyroid tissue, so placed, may take upon itself all the changes and degenerations that normally located tissue does, and I wish to emphasize the fact that unrecognized intrathoracic goitres that become hyperplastic or malignant can present the most tangled set of consequences that would tax the acumen of the best diagnosticians.

Hyperplasia, adenonatous formations, cystic degenerations, malignancy, etc., all have appeared in the intrathoracic goitres. Brown atrophy of the myocardium, degenerations of the liver and nervous systems, and even exophthalmos result sometimes from the toxic intrathoracic goitres. One of Hertzler's cases had a typical exophthalmic goitre without any cervical enlargement. The hyperplastic goitre lay behind the sternum.

Just hypertrophy alone becomes desperately important when we recognize the near presence of the aortic arch, innominate veins and artery, thoracic duct, common carotid, the sympathetics, both vagi, phrentics, the base of the heart, the trachea and the oesophagus. The goitre may be "pre-vasal," or "retro-vasal." The growth depending upon whether the enlargement is the lobes, lobe, isthmus, or accessory gland, will press against the above named organs because the sternum and clavicular articulations are more fixed. One of my cases demonstrated this very fact by the wedging in between the right portion of the manubrium sterni and sterno-clavicular articulation collapsing the trachea and causing nearly fatal apnoea and cyanosis during primary and secondary anathesia. The injury to the recurrent laryngeal nerve occasionally becomes the symptom to attract the diagnostician to the possible presence of intrathoracic goitre. Anteriorly, amongst the bony limits we have the manubrium sterni, sterno-clavicular articulations and about three ribs, and, posteriorly, three upper cervical vertibrae.

"Sabre-sheath" or "S"-shaped trachea occasionally occur where you have the pressure from both deep lateral lobes at the same level or at different levels.

Intrathoracic goitre may be associated with an enlarged thymus to complicate matters in the youth.

SYMPTOMS—SUBJECTIVE

1. Sensation of choking is quite a common symptom amongst this class of patients and frequently they hold their heads in a fixed position to permit easy respiration.

2. Furthermore, some become so dyspnoeic, paroxysmally, especially at night, that they are forced to sleep in a sitting position, and occasionally are accused of being asthmatics. The peculiar sucking in of the epigastrium and supra-sternal space is called by the French, "tirage."

3. Dysphasia is more common in intrathoracic goitre than cervical goitres.

4. Vertigo and roaring in the ears are complained of.

OBJECTIVE

1. When there is sufficient pressure on the return circulation to the heart we have the caput medusae, and congestion of the head and neck, and even cyanosis and sometimes edema of the corresponding arm. These are, of course, common to other mediastinal growths. This congestion and the pressure on the recurrent laryngeal nerves have resulted in edema of the glottis according to the experience of Kocher, Kreuzfuchs, Crotti, and Crile. The seriousness of this symptom I need only mention to have it appreciated.

2. When we are confronted with the "plunging goitre" on coughing, deep respiration and swallowing, there is a mass appearing at the supra-sternal notch which can be palpated, disappearing into the mediastinum during rest. The pedicle and nonincarceration permits this demonstration which is very interesting as well as startling. If the examiner's palpating hand is held at the supra-sternal notch while the patient swallows, an intrathoracic goitre can be felt, and a small one can be held partially upward for demonstration.

3. Inhibition of the normal upward movements of the larynx and the trachea can be demonstrated by the usual palpation. In aneurysm of the aorta we have the tugging, but this symptom in these goitres is more inhibition and not tugging.

4. Unilateral paresis or paralysis, more common than the bilateral, of the recurrent laryngeal nerves can easily occur as a pressure and stretching result. Therefore, hoarseness combined with any of the pressure symptoms should make us very suspicious.

5. Percussion at the manubrium sterni and the sterno-clavicular articulation will elicit the most important sign of dullness. This varies greatly with the size of the mass and its exact location. I have been in the habit of percussing all persons presenting themselves for examination of the chest, especially goitre cases. In Case No. 1 we have the need for the demonstration of this sign, as without it I am sure my case should have succumbed during thyroidectomy. Furthermore, an occasional unexplained cyanosis and difficult breathing, signifying pressure on the trachea during operative proceedure on other parts of the anatomy on people born in the goitre belt, might be explained by deeply placed or intrathoracic goitres.

This dullness has usually a downward convexity and a change in its size can sometimes be noted on swallowing.

6. Auscultation over the manubrium may sometimes bring out the fact whether the trachea is compressed, by a loud inspiration or a prolonged tubular expiration.

7. The X-ray with its skiography and fluoroscopy gives the most important information in intrathoracic masses and should be the routine in attempting to differentiate the various signs in order to clearly demonstrate and complete the knowledge of the pathology in the mediastinum. In spite of inspection, palpation, percussion, and auscultation the X-ray decides the location and many times the relationship and pathognonomic signs of intrathoracic goitres and other growths. Antero-posterior and lateral-views should be made. This is all emphasized by Nicholls of Crile's Clinic, Crotti, at Mayo's, all the foreign authorities, and, in fact, by every radiologist.

Antero-posteriorly, the shadow is larger than the dullness. It is continuous with the cervical portion when the latter is present and, depending upon the size of it, may extend to the base of the heart or to the third cartilage, and beneath one or both sterno-clavicular articultations. The outline may be smooth if the mass is a single adenoma or colloid, but an irregular undulating border would indicate a multiple nodular growth. When the border is irregular, the mass fixed, with alteration of bony and soft tissue structure, and emaciation, malignancy should be uppermost in the mind of the physician.

To diagnose the presence of a mediastinal growth with certainty is not always sufficient. We must decide whether it is an intrathoracic goitre or not. A cervical goitre may be cured, but we may locate its elongated pedicle and find it nestling behind the manubrium sterni

As was said before, the trachea would be shown by its rings and would denote whether the mass was bilateral, unilateral or median. The aorta would also show, and its displacement downward or to either side would de demonstrated.

The upward movements of the intrathoracic goitre on swallowing and deep respiration would be observed and the lateral angle between it and the aorta would increase its size. These are pathognonomic signs in non-incarcerated intrathoracic goitres that were described and emphasized by Crotti and Nicholls. The angle may be increased and the aorta may rise, but this would be due to the compressed aorta being released as the goitre rises with respiration. The apparent expansile dilatation of the mediastinal mass, synchronous with the heart

beat, can be observed as transmitted and not expansile as in aneurysm.

DIFFERENTIAL DIAGNOSIS

As I have taken up the various symptoms that are important in the diagnosis of this condition, I need only to mention the pathognonomic ones. The entire history of the patient, especially as to the location of birth and residence, becomes very important in attempting to differentiate the mediastinal masses.

On examining a patient we must first note the presence or absence of a cervical goitre, and, if present, outline its lower border, using palpation, percussion and auscultation to elicit it. The absence of a lobe should be noted and a search made in the mediastinum for it, especially when we find a pedicle extending to the supra-sternal notch. Inspect the neck, face, chest and arms for external signs of pressure; compare the two carotids and radials for differences in pulse strength; look for irritation to the recurrent laryngeal nerve and sympathetic; any fixation and ptosis of the larynx; dysphasia; and inquire about the various other subjective symptoms mentioned above.

As the X-ray becomes so extensively ac cessible to practically all practitioners, we have the greatest help in outlining and completing the diagnosis of this abnormality of the thyroid. Permit me to state here, emphatically, that we should never allow a patient to pass through our hands with the need of a mediastinal diagnosis, without availing ourselves of the X-ray.

The conditions from which we must differentiate intrathoracic goitres are as follows:

1. Aortic aneurysm: With history, heart and circulatory signs, transmitted pulsations and the X-ray demonstrating the varying angle on respiration and swallowing, we can separate with certainty these two conditions.

2. The possibility of a thymus should be considered. The history, especially the age and the X-ray findings will surely differentiate.

3. Syphilitic and tuberculous mediastinitis will resemble intrathoracic goitre, but the temperature curve, Wassermann test, specific treatment, enlargement of the glands (skiagram), and the history will clear the differences.

4. Tumors of the ribs, sternum or vertebral spine, (enchondromata), should be thought of, but with the X-ray and the adherent mass we can easily rule them out.

5. Malignancy of the intrathoracic goitre or other glands would need careful consideration. The history, the age, the circulatory signs and the X-ray findings, as have been described would fix the various signs to make a differentiation clear. Here is where skiography and fluroscopy are essential.

6. Hodgkin's disease may complicate the findings, but the multiple irregular glandular enlargements, the presence of enlarged glands in other portions of the body, the blood picture and pathological examination of a superficial gland will rule out this possible condition.

7. Lung abscess and pneumonia of the apex are mentioned by Nicholls, but with our means at hand for diagnosis we need only mention these.

With all this I am not minimizing the importance of the diagnosis, and recognize its difficulty, especially when we have one of these conditions, and from it, we must differentiate a large intrathoracic goitre. Occasionally, we must admit, a toxic substernal goitre may pass unrecognized.

8. Diverticulum of the oesophagus can be differentiated most positively by the Barium X-ray skiagram and fluoroscopy.

PROGNOSIS

The prognosis depends upon the size and numbers of lobes involved, the location, and whether the adjacent organs are compressed laterally or antero-posteriorly. Stubborn catarrhal conditions arise from pressure. Edema of the larynx is recognized as a very serious complication.

Degenerations, even malignancy, may arise in the displaced thyroid. Infection of, and hemorrhage of the mediastinal goitre can occur, endangering the life of the patient.

You can easily appreciate that toxic intrathoracic goitre with its hyperplasia, and sometimes hypertrophy, bears important consequences, such as, myocarditis, hepatitis and nerve degenerations.

The most important is the tragic "sudden death," "mort sans phrase," that Crotti stresses in his book on goitres. One of Hertzler's cases died during one night's illness from a hemorrhage in an intrathoracic goitre. Anesthesia for operative procedures in other portions of the body may result in a death on the table in an unrecognized case of the malady. Kocher refers to a sudden death occurring a few days after an operation from the disturbance of an old thrombus of the left internal jugular, resulting in a pulmonary embolus.

In the hands of those of us who do thyroid surgery, the successful removal of an intrathoracic goitre gives the best prognosis. Furthermore, operation should be done early, before incarceration occurs, the danger being directly in proportion to the size of the goitre and in relation to the difficulty of delivery of the mass, injury to the pleurae, and pressure of the heart and the vessels at its base.

TREATMENT

As the prognosis depends upon the treatment it is well to describe briefly the surgical application. Operation is best done with a local anesthetic on account of the possible consequences during general anesthesia. We will find a very low Kocher collar incision the best method with the usual high division of the sterno-hyoid and-thyroid muscles, getting wide retraction. One should search for the pedicle as it contains or is closely associated with the large bleeders . If there is no incarceration one can easily deliver the mass by grasping the capsule, but do not be violent on account of the possible adhesions in a calcified mass and the delicacy of the walls of the veins. Once delivered, the removal becomes comparatively easy.

When the mass is large and incarcerated, the difficulty becomes greater, and we must eviscerate a portion before delivering and prepare for rather viscious hemorrhage. If this becomes too severe, direct packing and await a better time (Hertzler), but with sufficient evisceration and drawing on capsule a delivery can be done, and the usual procedure followed for the removal of the goitre.

I must confess that it may not be even as simple as I have described, and one would need use a spoon to assist delivering the goitre and sometimes, as Hertzler and Kocher mention, divide the sternum, articulations or costal cartilages.

The wound is closed in the usual way with a 24-hour drainage after making sure if no remaining hemorrhage.

Case No. 1. Mrs. S. W., who was 53 years of age and married, came to me for a goitre operation. This goitre she had for 20 years or more and for the last 2 or 3 years it had caused a great deal of pressure, preventing patient from resting flat in bed, needing several pillows at night. She spoke of a sensation of trying to "back away" from the choking sensation in the lower part of her neck, especially the left side.

Briefly stated, her history is as follows:

Family history contains nothing of interest, and hers is the only goitre in the family that she knows of, although she is the fourth of ten children. There has not been any tuberculosis nor cancer.

Personal history is also practically negative. She has had no typhoid, nor pneumonia and no children's diseases. Menstrual life was average with menopause at the 48th year of average character. She bore two children, baby 26 years of age.

Examination, May 22, 1923. She was 5 feet, 4 inches tall and weighed 120 pounds. Her mouth contained upper plates and one bad tooth, with tonsils negative. Circumference of neck, 14½ inches. She had a distinctly large palpable, multiple adenomata of the left lobe of the thyroid. The isthmus was occupied by a large adenoma. The right lobe was very small to the palpating fingers, but a small adenoma could be felt just against the clavicle and was a portion of a mass that extended behind the articulation and sternum. In other words, the right lobe had dropped into the chest.

There was a dullness 1½ inches to 2 inches beneath the manubrium sterni and to the right.

The lungs and heart were negative. The abdomen was negative except for a slight tenderness at McBurney's region. Blood pressure was 138/90 and the urine normal.

I operated on May 25, 1923, under a gas-ether (Morgan's) anesthesia. A low collar incision was made and the usual dissection with high severing of the sterno-thyroid and-hyoid muscles on the left side, as that side was very prominent. The patient became cyanotic and even on the rapid severing of the left upper pole to release the pressure, she became more cyanotic, and practically ceased breathing. We lowered her head, administered oxygen and artificial respiration. I then recognized that it was evidently due to the substernal mass. That was quickly attacked and, a large mass removed which was wedged behind the sternum as in Figure 1, 3 inches in diameter and 1½ inches in thickness. Instant relief ensued and the removal of the above and a large left lobe with the isthmus was accomplished, leaving a portion on the posterior capsule of the left side and completing the operation in the usual way by suturing the muscles, and closing the wound layer by layer with subcutaneous silkworm gut in the skin and drainage in the center of the wound. Her pulse after the operation was 70 and fine quality, and she had an uneventful recovery with a good voice and no impairment of vocal cords.

When the mass was removed, on the upper and middle anterior portion could be seen distinct pressure marks of the clavical and manubrium sterni.

I feel that if thorough examination had not been made previous to the operation, and we had no knowledge of the possible intrathoracic lobe, death would have ensued before we realized it. Furthermore, if an operation for some other surgical disease was necessary, the patient would have succumbed, as she was dead to all intents and purposes, if that obstruction had not been diagnosed and immediately relieved.

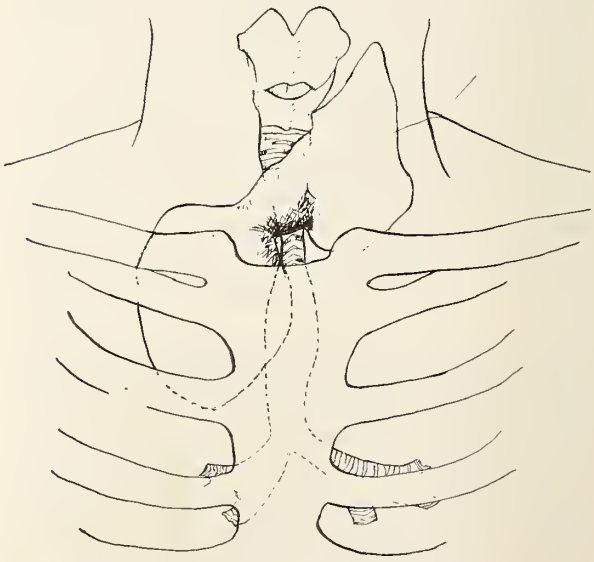

Fig. 1—Mrs. S. W., Intrathoracic Goitre

Case No. 2. Mrs. E. E., 61 years of age and married, who had a massive goitre for 44 years, came to me for operation on May 15, 1916. It was so large

that she was unable to see the pin go into her waistband for over 40 years.

As I present this case only for its example of a deep goitre, I will pass the history sheets and original photographs with the drawing representing the distance below the sternum. (Figure No. 2(.

In her family, we find several goiters. I operated her sister at 50 years of age, for an immense colloid goitre in 1921, and she had one daughter with an adenomatous thyroid and one with a simple goitre out of 4 children.

Her personal history is of no moment except for the presence of this large goitre and its gradual increase with each of her pregnancies and at menopause, the latter occurring at 53 years of age.

The operation was done with ether anesthesia, using the low Kocher incision and division of muscles and capsule. With considerable difficulty I removed 1 pound, 4 ounces of pathological thyroid tissue, consisting of cartilaginous, myxomatous and colloid masses, encountering considerable bleeding that occurs in the presence of large vessels in these large goitres. The posterior portions of both lobes were left in. The space beneath the sternum, after removal, would contain nearly my whole fist. The wound closed in the manner described with the other case.

Thyroid Tumor—Mrs. E. E.

She had an uneventful recovery, leaving her bed on the eighth day.

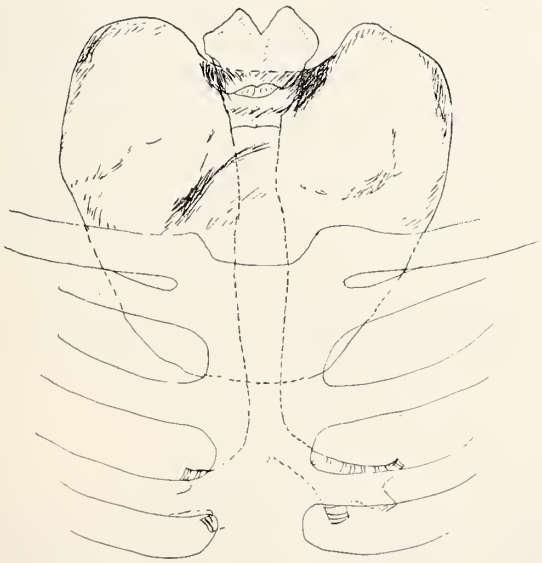

Fig. 2—Mrs. E. E., Deep Goitre

Case No. 3. Mrs. L. H., 23 years of age, married, came for a goitre operation on October 4, 1922. She had this goitre since she was 16 years old and earlier, but it had been growing on the left side of her neck, filling all the space from the left lower maxilla to the chest. She had been very nervous for the last year with attacks of nervous, uncontrollable trembling and shaking lasting 30 minutes to 2 hours. She suffered from palpitation, and was very excitable. She came from a goitreous family, as two sisters and mother were seriously afflicted.

She had been married 1½ years and had never been pregnant.

Examination, October 4, 1922. She weighed 110 pounds, was 5 feet 5 inches tall and not well nourished. The teeth were pyorrhoeic, but tonsils did not show active infection. Her neck contained a large adenomatous mass occupying the isthmus and left articulation and manubrium sterni, pushing the trachea to the right and bulging the sterno mastoid well outward.

Her lungs were o. k. and the heart regular, equal and rythmic, but had a pounding beat of 126-132.

The abdomen was negative and the liver was not enlarged.

Blood pressure was 130/80 and the urine negative.

Diagnosis: A left toxic, deep adenomatous goitre.

Operation: October 19, 1922. A low collar incision was made with the Kocher dissection and wide retraction, severing the muscles high up.

It was easy to lift the large mass from the neck and beneath the sternum. I removed practically the entire lobe and isthmus as the adenomatous mass extended well over to the right. Figure No. 3 gives the relationship of this "deep goitre" very well.

The wound was closed, layer by layer, as described before, with cutaneous silk worm gut in the skin and drainage in the center of the wound. The latter is usually left in only 24 hours.

Patient made an uneventful recovery, getting up on the fourth day.

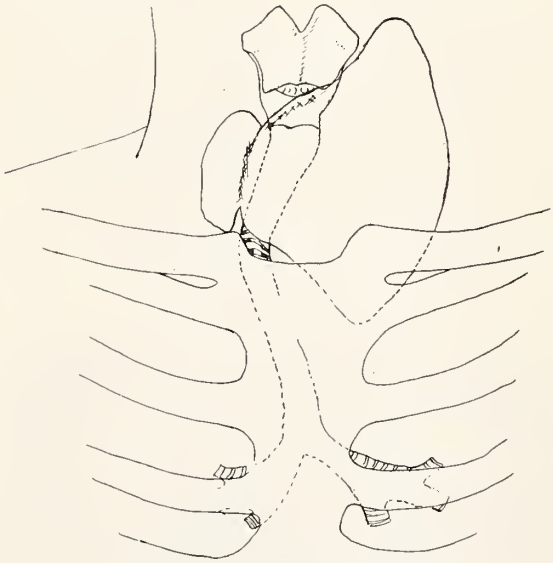

Fig. 3—Mrs. L. H., Deep Goitre

Case No. 4. Mrs. E. B., age 33, married, mother of three children, came to me for goitre operation June 12, 1922. She complained of the mass "pressing on the wind pipe" and interfering with her lying flat in bed.

Her family history and personal history were practically negative except that she suffered two attacks of asthma in the last six months. On examination, she was 5 feet, 5 inches tall, and 129 pounds in weight. Tonsils were negative, but her teeth were pyorrhoeic. Her neck contained an enlarged thyroid with one adenoma in each lobe and one that presented at supra sternal notch being entirely substernal.

Lungs were negative. The heart presented no murmurs and was regular, equal and rythmatic and occasionally intermittent. She had a tachycardia (98-110 per minute) and also a fine tremor.

The urine contained a very faint trace of albumen and had a few hyaline casts in the sediment. The blood pressure was 127/78.

Diagnosis at that time was toxic cervical substernal goitre.

Thyroidectomy was done June 24, 1922, in the usual low collar Kocher method, removing all the adenomatous tissue, leaving a small portion of the right and left lobes on the posterior capsule. I present this case on account of the large space that was left beneath the sternum after the removal of the substernal thyroid mass. This was the portion that caused the pressure symptom, and as the adenomata were hyperplastic, it, no doubt, contributed to the toxicity.

She had an uneventful recovery, leaving bed on the fifth day, stating definitely that the pressure symptom had disappeared, and the throbbing nervousness had also ceased. No doubt this substernal mass also contributed considerably to the sudden dyspnoea or asthmatic attacks.

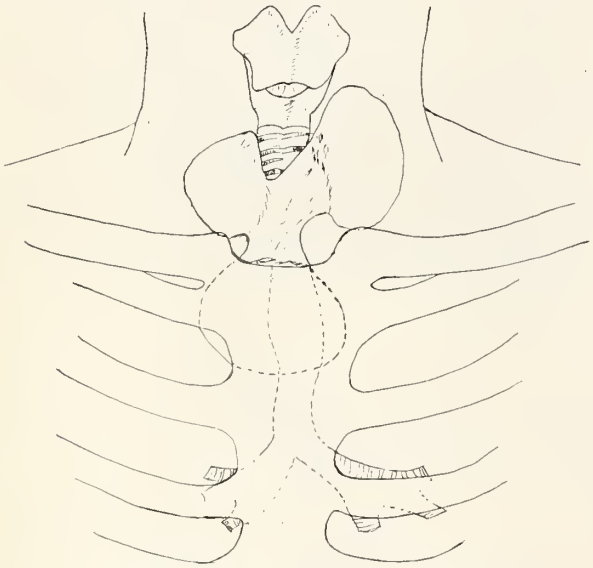

Fig. 4—Mrs. E. B., Deep Goitre

APPENDED

Case No. 5. H. R., Jr., age 24, single, came to me for neck and heart examination, July 16, 1923. He complained of a "choking in the neck" on exercise, on lying flat in bed, and on blowing on a wind instrument.

His family history was negative with the exception that his sister has a simple goitre, and I did a thyroidectomy for a large multiple adenomatous goitre on his mother on June 15, 1923.

Personal History: The only diseases he has had are measles and chicken pox, with no sequelae. On inquiry, I find no history of rheumatism or pneumonia. In 1917 he was operated on for goitre and apparently had a very good recovery. He was not accepted in the draft on account of heart disease.

On examination I found an average, well built young man of about 25 years, 5 feet 8 inches tall, weighing about 142 pounds, with teeth and tonsils negative. In the anterior portion of the neck you observe a low collar scar of the thyroidectomy in 1917, and at the location of the left upper pole, a roundish mass as large as an average egg, 2 inches in diameter, firm and hard, that moves upward with swallowing. This mass had been rather fixed to the trachea and was a recurrent adenoma from a small portion left following the primary thyroidectomy. The examination of the lungs were negative and the heart hypertrophied with the anterior border of dullness just within the nipple line. The cardiac area pulsated and the apex beat laid in the upper border of the sixth interspace on the left. On auscultation we discovered a large roughish presystolic murmur which extended into diastolie. Exercise found his compensation very good. The heart beat and pulse were regular, equal and rythmatic. His abdomen was negative; urine and blood pressure normal.

On account of the choking sensation he desired that I remove this mass in his neck. A thyroidectomy was done December 11, 1923, using the local infiltration of novocain ½ per cent with adrenalin. A low collar incision was made practically within the lod scar, and, with great difficulty on account of scar tissue, the flaps of skin and platysma were dissected up and down. The usual high division of the muscles was done. I removed the adenoma which was roundish, as stated before, about 2 inches in diameter and slightly oblong at the location of the upper left pole. Protrudidng in the supra-sternal notch could be seen a small adenoma, but on lifting it up and attempting to remove the mass, I discovered it to be 2¼ by 2½ by 1½ inches in dimensions and distinctly and totally beneath the sternum, just presenting at the notch with the neck extended. Some difficulty in hemorrhage at the lower end of the mass was encountered. I did the usual closing, suturing muscles and replacing platysma. Two silk worm gut sutures were placed in the skin. He had an uneventful recovery, leaving his bed on the fourth day.

This sub-sternal mass was entirely intrathoracic and acted as a ball valve, choking the patient. The mass at the upper left pole acted only as a contributing cause of the symptoms that I have described above.

Figure 5 demonstrates clearly the location of the intrathoracic mass in Case No. 5.

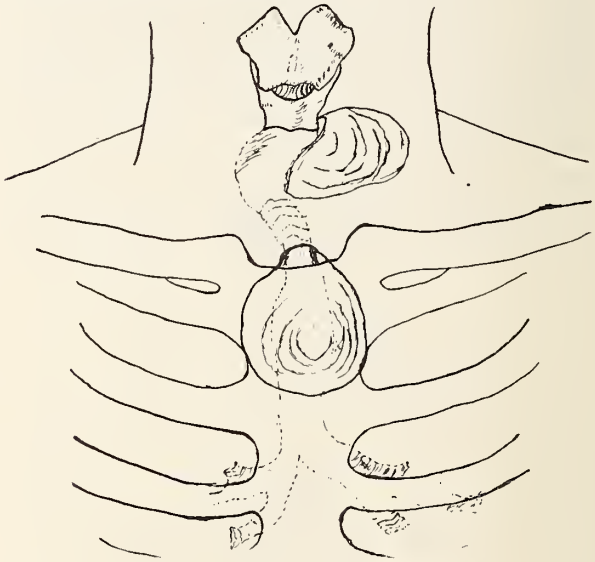

Fig. 5—H. M., Intrathoracic Goitre

SUMMARY

1. X-ray all suspiciously deep or possible intrathoracic growths, especially goitres. If there is any possibility of a ptosis of a lobe or isthmus or pressure on the trachea or vessels, etc., X-ray the upper thorax.

2. Surgery promises the best results.

3. Operate with a local anesthetic.

4. In operating do not handle roughly, and be careful of tearing thin walled veins

that will retract into mediastinum and cause dangerous hemorrhage.

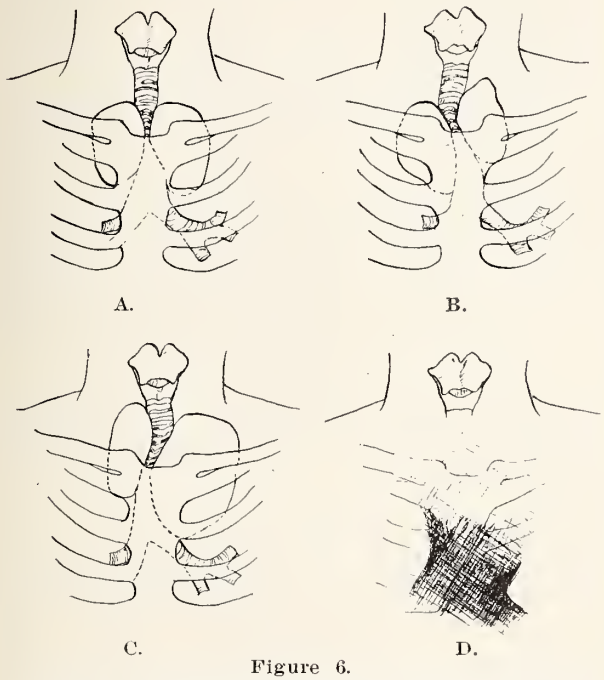

Figure 6.

A, B, C, graphically represents various positions of the lobes and pressure effects on the trachea. D represents angle between heart shadow and intrathoracic goitre. (D, taken from Nicholl's "The Thyroid Gland," Figure 35, page 116.)

5. Think of the possibility of this condition in persons who take a "bad anesthetic."

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*Read at the Upper Peninsula Medical Society at Iron Mountain, August 22, 1923.

THE EARLY DIAGNOSIS OF PREGNANCY WITH PRELIMINARY REPORT OF PHLORIDZIN TEST CASES

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A review of the literature with some such heading as the above shows the need of some new, sure and simple method to aid us in the early diagnosis of the pregnant state. From the physician's standpoint it would be most satisfactory to tell our patients upon their first visit whether or not they were pregnant. The diagnosis of pregnancy at its onset is often of value from a medico-legal point of view; also for an early interruption of the pregnancy where such interruption is indicated. From the patient's standpoint, she is always most anxious to know at once, and often thinks the physician is not very competent or he could tell her with some certainty.

*Read at Harper Hospital Staff Meeting, Feb. 22, 1924.

The use of the X-ray in diagnosing pregnancy is most interesting and is of great help in later months in determining the exact position, whether a single or multiple pregnancy, etc., but is of little or no help during the early stages. After considerable work done on the subject, the precipitation of red blood corpuscles was found not to be reliable. Because of complicated laboratory methods as well as the lack of uniformity of results, the Abderhalden test has been discarded.

In more recent years many articles have appeared discussing the decreased sugar metabolism during the early months of pregnancy. The fact that glycosuria may be seen in pregnancy as a transient symptom has been noted by various writers since 1856. All practically agree that the spontaneous glycosuria usually appears after the sixth month; that it is mild in type; that the sugar excretion is independent of the carbohydrate in the diet; that there are no symptoms of diabetes and that the glycosuria disappears after labor. The recognition of glycosuria as a symptom of early pregnancy is the clinical outcome of work done by Ryser in 1916 and Gruenthal in 1919. The former determined that when pregnant women were fed on a series of different sugars, the blood sugar values never exceeded normal physiological limits. The latter showed that blood sugar curves were identical in non pregnant and pregnant women after ingestion of like amounts of glucose, but that the pregnant woman responded with glycosuria. They found this to be unreliable after the third month. Welz and Van Nest of Detroit in their article on "Sugar Test in Pregnancy," published in January, 1923, reported on 71 cases of early pregnancy in which glucose was given per os to produce glucosuria. Their conclusion was that glycosuria was of no prognostic importance in pregnancy, but of considerable diagnostic value up to the 12th week.

In November, 1923, Long and Hirst of Philadelphia published an article on "Ingestion Glycosuria an Aid to Early Diagnosis of Pregnancy," and in the summary said, "Our series brings added evidence to strengthen the assumption that an ingestion glycosuria can be induced in the early months of pregnancy, that it is a valuable diagnostic aid, and that the glycosuria disappears when the fetal and maternal parts are no longer in physiological relationship. The literature shows a 95 per cent

accuracy with glucose ingestion diagnostic technic in the first three months of pregnancy." The above was the first point in the summary and I will refer again to the article.

Recently Kamnitzer and Joseph working at the Municipal Hospital, Berlin, have tried to prove that a glycosuria can be artificially produced in the early months of pregnancy by the intra-muscular injection of Phloridzin. In the non-pregnant such an injection should not produce glycosuria, nor is it likely in those pregnant over twelve weeks. During the first three months glycosuria should appear. It is the technic of these men that I have used and which I shall explain here with case reports and results. First, however. I wish to mention the work along the same line by several others. Dr. Alfred M. Hellman of New York has reported 24 cases and thinks that although the number is too small to draw definite conclusions, that certainly there is something in the test and deserves further study. Doctors Long and Hirst, whose article was mentioned above, had at that time, November, 1923, only seven cases to report and said in their article, "The Phloridzin technic was thoroughly disappointing. Dr. W. C. Gayler, St. Louis, reported twelve cases and said that the test was "extremely simple of application, fairly accurate and very fascinating."

Kamnitzer and Joseph, after considerable experiment, found the test most reliable when one c.c. of a 2 per cent solution of phloridzin was used. The preparation we use is supplied in one c.c. ampules containing 0.002 gram of phloridzin and 0.001 gram Beta-Eucaine Hydro-chloride.

TECHNIC

The patient is first asked to urinate and this sample is marked control. She is now given six ounces of water to drink and one c.c. of phloridzin preparation is injected intramuscularly. Routinely I have used the hip or thigh muscle as site of injection, although there has been no soreness following injection. One-half hour after injection patient urinates into a clean vessel which is marked (1), and immediately drinks six ounces more of water. This is repeated each 30 minutes until we have the control specimen and three 30 minute specimens. It is well to test the control specimen as soon as passed and if the test for sugar is positive the phloridzin test is not applicable to the case. The samples one, two and three are then separately tested for sugar by the Nylander Test. The Nylander Test is as follows: Dissolve four grams of Rochells Salts in 100 c.c. of 10 per cent solution of Caustic Potash and add two grams of Bismuth Subnitrate. Place on a water-bath until as much as possible of the bismuth subnitrate has entered into the solution. Mix ten volumes of the urine to be tested with one volume of the solution prepared as above and boil. A black coloration or precipitate, either immediately or after a few minutes of boiling, will be formed in the presence of sugar.

As usual with different tests and laboratory aids in diagnosis, this one also has limitations and seemingly its share of complications. The patient should report early in the day so the test can be made on an empty stomach. Such drugs as antipyrine, salicylates, saccharin, chloral hydrate, camphor, chloroform, and adrenal preparations sometimes give a positive Nylander test and one must see that they have not been used before starting the test.

I wish to report the results of the test made on 20 patients, about an equal number of private and clinic.

CASES 1 TO 6

In the beginning, to become familiar with the technic and to become familiar with a negative reaction, I carried out the details as above outlined on five unmarried patients. The ages ranged from 25 to 37. All were healthy individuals and pelvic examinations were negative on the four examined out of the five. In each case the control urine test showed a white precipitate. The first sample 30 minutes after injection—same white precipitate, the second showed smaller amount of white precipitate and the third had no precipitate and the clear fluid was a light color. The white precipitate mentioned above is the normal reaction with the Nylander solution when added to normal urine and boiled, as I tried it on more than a hundred samples from both the male and female with constant result.

CASE 6

Mrs. F., age 32. Menses always regular and normal. One child two years old. Last period August 13th, 1923. The test made Nov. 30th was positive. Examination at that time and at frequent intervals since show a definite pregnancy and one which was probably within the 90-day period of development at the time of test.

CASE 7

Mrs. B., age 24. One child, one year old. Two weeks overdue. Had often gone two or three weeks past period time. Did not have any symptoms of pregnancy and did not think it possible for her to be pregnant. The test was positive. Later examination showed her to be pregnant.

CASE 8

Mrs. W., age 28. Examined Nov. 23rd, 1923. Last period was Sept. 18th. Periods were always regular and normal. From examination I was not able to diagnose a pregnancy. Test was positive. At the next examination I was able to find signs of pregnancy and which has continued to develop in a normal manner.

CASE 9

Mrs. K., Age 30. Consulted Jan. 7th. Has one child, born March 22nd, 1923. Nursed baby about six weeks. Flowed in May, June, July and Aug., did not flow in September, but had a normal period Oct. 18th. Twice previously when not pregnant she had missed two and three periods. Examination was negative for pregnancy. Test was negative. January 23rd she began a normal period.

CASE 10

Miss H., age 24. Menses regular, normal. Last period Aug. 10th, 1923. Examined Nov. 19th and diagnosis of pregnancy made. She admitted the possibility. Test was positive. Further examination shows normal pregnancy developing.

CASE 11

Mrs. L., age 28. Two children. 1917 left ectopic removed. Last period Nov. 15th. Jan. 7th test made which was positive. This reaction however, was interesting in that it differed from the others. First and second samples were at first negative, but the second sample showed a dark precipitate after being boiled and standing ten minutes. Uterus seemed large and has developed normally for pregnancy since.

CASE 12

Mrs. V., age 31. Para 3. Two abortions, first at six weeks, second two months, both since birth of last child. Periods regular and normal. Last normal period Aug. 1st. Examined Sept. 27th and diagnosis made of two month pregnancy. Nov. 19 and 20th patient flowed quite profusely. Examination showed cervix soft and fundus was not firm and was lying more to the right side than normally. The abdomen was tender. On the 21st of November she began having some contraction pains at irregular intervals. On this day the test was made and was positive. This woman was a clinic patient and was lost track of until a few days ago when I had the Social Service Department look her up in order to complete the record. She miscarried, Dec. 23rd.

CASE 13

Mrsr. T., age 19. Married two years. One baby seven months old. Baby weaned 30 days before examination. Irregular periods. Had a period in July and none since. Erosion of cervix and T. B. had been diagnosed. Test made Nov. 28th was negative, which is correct as verified by several examinations since.

CASE 14

Miss L., age 35. Has missed one period several times since menses began. Denies the possibility of pregnancy. Seen first on Oct. 25th, hymen only slightly ruptured, no enlargement of uterus or other signs of pregnancy. Last period Sept. 10th. I saw her again Nov. 22nd and test was positive on this date. Confronted with the result of this test she admitted the possibility of pregnancy, which was shown to be correct by examinations since.

CASE 15

Mrs. R., age 32. Always irregular. Four years ago one tube and appendix removed. Now four days overdue. Test negative. Menses appeared two days later.

CASE 16

Mrs. A., age 27. First period at 14. Regular, 21-day type, duration four days, no pain. Pregnant at 18—normal delivery. No pregnancy since. September, 1923 began with excessive flowing. Has flowed five times of several days duration during past two months. Some nausea. No pelvic pain. Examination shows a large retroverted uterus and large left ovary. Diagnosis of threatened abortion was made. This date was Dec. 5th, 1923. Dec. 12th she was continuing to have bloody discharge, no pain but complained of an uncomfortable feeling as of a "lump" in lower abdomen. On this date test was positive. I did not see her again until Jan. 9th. She had not flowed since last examination, Dec. 12th. Uterus was smaller, but retroverted and any attempt to put it in proper position caused considerable pain. Patient was again examined on Jan. 23rd, 1924, she had flowed a small amount for two days. As far as I am able to determine this patient did not have a miscarriage, probably never was pregnant and the condition in the pelvis, other than the retroversion, is not diagnosed to date.

CASE 17

Mrs. C., age 29. Complains of pain in lower abdomen, continuing for past week. Periods regular and normal. Has been married four years and had four miscarriages. Last menses Oct. 15th, 1923. Has yellowish vaginal discharge and pain, dull in character, particularly when walking. This is accompanied by nausea and frequent urination. Examination showed rigidity in lower abdomen. No mass felt, Breasts negative. Colostrum absent—cervix soft, uterus forward—large. Diagnosis pregnancy. Jan. 5th test made was positive. Continuing to develop as a normal pregnancy.

CASE 18

Mrs. F., age 33. Complains of amenorrhea, leucorrhea, swelling of lower abdomen. Six years ago had right tube and appendix removed. First menses at age of 15—never regular. Always painful with scanty flow for five to seven days. Never pregnant. Last period Aug. 10th, 1923. Several diagnoses of pregnancy had been made before she came to clinic. The first date of our examination was Dec. 19th and for fourteen days previous to this she had had pains in lower abdomen. Examination reveals a hard mass, smooth and slightly movable. The mass appeared to be the body of the uterus and extended into the abdomen to five fingers breadth below the umbilicus. She says her breasts were enlarged and tender. The test at this date was positive. We examined her several times since and found that the mass was not enlarging as a pregnancy should, that she is having more tenderness in lower portion of her abdomen and for past two weeks has had some bloody discharge. Our diagnosis is a fibroid and we have advised her to enter hospital for further examination and operation.

CASE 19

Mrs. H., age 31. Has had one normal delivery and four miscarriages. First examination was made in clinic Nov. 21st, 1923. The history indicated an early pregnancy and examination showed uterus enlarged to the size of an orange—rather soft—fundus slightly retroverted—cervix soft. Diagnosis of two months pregnancy made. One week later she flowed for two days—stopped for two days and then flowed some each day for one week. Dec. 4th, test was

made and was positive. On this day she was examined and discussed by six or eight members of the staff and a probable diagnosis of fibroid made. She had a very thick and tense abdominal wall and we were anxious to determine the accuracy of this diagnosis and advised the gas and X-ray examination. An appointment was made for her to return the following day, but she did not appear and we have lost track of her.

CASE 20

Mrs. T., age 38. Had a recent irregular menstrual history and was worried mostly because of a rather rapid enlarging of lower abdomen. When standing she had the appearance of being five or six months pregnant. First examination made Oct. 24th, and a diagnosis of a large fluctuating mass filling the pelvis and lower abdomen was made by the first examiner. Nov. 1st she had a normal period of five days—no pain excepting a headache. Nov. 21st she began to flow again, the period this time lasting four days. She claimed to be increasing in weight and size of abdomen and said she was not able to wear her usual corsets. Nov. 25th, examination made and report was as follows: Normal cervix; uterus a normal size and in anterior position with a mass in left side of pelvis. She had another period Dec. 5th, and was sent into the hospital for gas and X-ray examination. The phloridzin test made Nov. 22nd, was positive. Six attempts were made to inject carbon dioxide into the peritoneal cavity through the tubes. Each time a pressure of 220 m.m. and twice a pressure of 240 m.m. was reached. No gas could be forced through. It was then injected trans-abdominally and X-ray plates made. The abdominal organs were negative. There was no tumor mass in abdomen. The uterus was of normal size, shape and position. Both ovaries were enlarged, the left being larger than the right.

It is claimed that in abortion the test will function only as long as most of the placenta is attached. In our patients there was but one abortion case which gave a positive reaction several days after the flow started. However, she did not abort for two weeks following the test, and undoubtedly at the time the test was made the greater portion of the placenta was still attached. It is also claimed that extra-uterine pregnancy does not respond to the test. We have not had the opportunity to try this but if we find it is true it will be an aid in differential diagnosis. Also cases in which blood has been lost since the suspected pregnancy started the test is indistinct or failed entirely. In this class belong patients who have previously undergone abortion or suffer from pelvic, cervical or similar inflammatory complications. This last claim is one set forth by one of the manufacturers of the product and is the result of work done by Kamnitzer and Joseph. The results of tests made on cases just reported do not bear this out. Cases No. 16 and 20 were pelvic inflammatory and gave a positive reaction. Cases 18 and 19 were pretty definitely fibroids and gave a positive action. There is one thing, however, I wish to mention at this point which I have noted in making the tests and which I have been unable to find any mention of in other reports. That is regarding the positiveness of the reaction. Other case reports all say simply positive or negative, but there is a big difference in many of the reactions. Some give a heavy black precipitate immediately when the Nylander solution is added to the urine 30 minutes following the injection of phloridzin. Others only after boiling, other after boiling and allowing to stand a few minutes. In other cases I find the precipitate is more of an amber than it is black and then there are still different shades of amber, depending on the case. I have no proof as to the following, but we may find, after more careful work, that we get the heavy black and rapid precipitates in the cases of pregnancy up to the third month, that it is during the one to six weeks period that the greatest degree of reliability prevails and when it will be of greatest value for diagnostic purposes. We had several positive results after the three month stage, although they were all of the amber color rather than black. And as more work is done we may be able to differentiate more definitely between the pregnancies, inflammations and tumors, by the character of the positive reactions.

In the series of tests there were three proven pregnancies over three months giving a positive reaction, and one about four months. There were six tests on patients between four days and forty-five days over the regular menstrual period that were positive. From a bimanual examination we were not able to make a diagnosis of pregnancy with any degree of certainty. All of these in the latter group have since developed the usual symptoms and signs of normal pregnancy.

Although the number of cases here reported is too small to draw definite conclusions or to give percentage, yet the findings agree so nearly with the findings of other men working along the same line, we feel that certain conclusions may be drawn. Seemingly healthy non-pregnant women give negative results with this test. Women pregnant less than twelve weeks and probably sixteen weeks, will as a rule give positive results with the test.

The work so far done is sufficiently positive to be of aid in early diagnosis and to encourage further study.

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MAY 1, 1924

Report Malpractice Threats Immediately to Doctor F. B. Tibbals, 1212 Kresge Building, Detroit, Mich.

Editorials

IODIZED SALT IN THE PREVENTION OF SIMPLE ENDEMIC GOITRE

Now that through the whole-hearted co-operation of the salt producers of Michigan and with the medical profession of Michigan iodized salt for cooking and table use is on the market, it may be well to say a few words about what accomplishment may be hoped for from its general use.

There are limitations to all things. Particularly is this true of all things medical. No one with sound judgment as an inherent quality, after examining the facts that are easily obtainable concerning smallpox vaccination, would doubt its beneficial effects. Still smallpox has not been banished from the United States, one of the most enlightened of nations. Nor would such an individual be long in coming to the conclusion that vaccination for typhoid fever is a great boon to the citizen and a great economy to the state. Still typhoid fever continues to show itself in our highly developed centers of population. Such will doubtless be the result in the prevention treatment of goitre. There will be those who will oppose taking the amount of iodine the creator hoped to provide for them. There will be those who will not learn about iodized salt or who, because of some superstition, will not listen to their grocer or physician when he tells them about the beneficial effects of iodized salt. Nor should we expect that simple endemic goitre would become unknown should every person in the state use iodized salt. We are all aware of the fact that simple goitre occurs in some individuals who live or have lived all their lives in non-goiterous regions. It is not necessary to go into an explanation of why such people develop goitre. Suffice it to say that they do. Furthermore, those of us who have been interested in preventing goitre in children by systematic administration of iodine, have seen some goitres develop in spite of it, but very few.

We may easily hope that within a comparatively short time all people in the state will receive iodized salt and through it the ingredient in the food that is lacking in Michigan. The people will probably ultimately demand that all salt manufactured or sold within the state shall contain the proper amount of iodine and thus legislation will be easily accomplished.

Our Committee was strongly of the opinion in the early days of its work that legislation was the way to introduce iodized salt. However, as its work progressed and as it learned more about matters of this kind, the more convinced it became that legislation was not the way to do it now. It was convinced that its work would progress faster by first creating a demand for an iodized salt.

As this article goes to press all physicians in the state who read have an opportunity to know that the Advisory Committee of the Pediatrirc Section of the Michigan State Medical Society has succeeded in getting the hearty co-operation of the salt men from the standpoint of their rendering a public service to the citizens of the state. All wholesale grocers in the state know about iodized salt and are now able to supply the trade demand and within a very short time practically every grocer in the state, including those in the remotest parts, will receive the message from the advisory Committee and the salt manufacturers, enlisting their co-operation in getting their customers to use the salt.

The amount of iodine in the salt:—It is

the belief of the Committee, after quite a careful consideration of the problem, that salt containing .01 per cent sodium or potassium iodide will carry sufficient iodine to be effective. This amount was based upon the per capita consumption of the ordinary family. We found, quite uniformly, that this amounted to approximately four pounds per person per year. It had been demonstrated that as small an amount as 3 milligrams a week was sufficient to prevent goitre in school children and that as great an amount as 10 milligrams a week produced no effects. We soon encountered a difference of opinion on the per capita consumption of salt. Some salt manufacturers had roughly estimated the amount as five pounds per person per year.

Accordingly, families utilizing four pounds per capita of the .01 per cent iodized salt, would receive 3.43 milligrams per week. Those utilizing eight pounds per capita per year would receive 6.86 milligrams per week or approximately one milligram a day.

After securing the approval of the council of the State Medical Society, the Committee furnished all the salt producers, with whom they had been working, a certificate which approved of this amount of salt. At a conference with Dr. R. M. Olin of the State Department of Health and a delegation of the council of the Michigan State Medical Society, held in Dr. Olin's office at Lansing, Michigan, March, 1924, because of a wish on the part of the State Department of Health for a .02 per cent iodized salt and because our investigations had shown this amount of iodine would not impart a taste to the salt when added to the food in the cooking, or have a deleterious effect in the use of salt for commercial purposes, it was agreed to approve a sodium or potassium iodide content of from .01 per cent to .02 per cent in salt used for cooking and the table. This information was transmitted to the salt men at the earliest time.

The Michigan salt producers are entitled to much credit and praise for the splendid way in which they have taken up this work, making it possible, because of their equipment and advertising organizations for every one to receive the amount of iodine demanded by the tissues of the body at a cost within the reach of the poorest citizen in the state. This certainly is no small contribution. Without men of such spirit it could not have been accomplished. The Advisory Committee wishes to take this opportunity to express to them its sincere appreciation.

Survey:—The use of iodized salt will doubtless accomplish much. With careful surveys such as those already completed by the State Department of Health no definite information of any magnitude concerning the real effort to encourage an extension of these surveys will be made by all those interested in the problem and that subsequent re-surveys will be given the same enthusiastic co-operation accorded by the professioin thus far.

IMPETIGO

Impetigo is rather a common infection among children. It is particularly prevalent in summer months, and the spring and fall school days. It is a distressing and embarrassing infection and causes much concern on the part of parents. As a rule it responds readily to treatment and can be eradicated in a week or ten days. However, quite frequently a physician encounters a very stubborn case that fails to respond to treatment. It is regarding these stubborn cases that this comment is concerned. The simple case customarily responds to the application of an ointment of ammoniated mercury or the red oxidi of mercury, but there are cases which appear uninfluenced by these ointments.

The reason is pointed out by Doctors Smith and Burky in the Johns Hopkins Hospital Bulletin. In an investigation they ascertained that persistancy of the infection was caused by a mixed infection of streptococci and staphylococci. When only a streptococci infection was encountered the condition cleared up promptly with the use of a mercury ointment. However, with a mixed staphylococci infection the condition persisted and did not respond to mercury treatment. On investigation it was found that the staphylococci were uninfluenced by mercury.

Search was then made for an effective remedial agent and argyrol, silver nitrate, zinc sulphate and yellow iodide of mercury were of no value. Gentian violet was then used and in it the authors state that we have a very potent remedy that will clear up the infection promptly and completely.

Gentian violet was used in a 5 per cent solution in 20 per cent alcohol. The stain is painted on after opening the vesicles and removing old scabs. After painting with the violet stain the area is covered with vaseline or boric ointment. Recovery ensued in from three to five days.

This use of gentian violet will be of desirable value in your treatment of these stubborn cases of impetigo.

THE KALAMAZOO CONFERENCE

The program that was outlined for a Spring Conference of the Council, Scientific Committee, Joint Committee on Public Education and County Secretaries, was held in Kalamazoo on April 16th. There was a splendid attendance and in every detail the discussions gave rich promises of a united, state-wide organizational activity.

It was determined that our Annual Meeting dates would be September 9, 10 and 11. The place being Mount Clemens as designated by the House of Delegates. Section officers will provide section programs for two section meetings. On the afternoon of the last day in place of separate section meetings, all the sections will unite into one general scientific meeting. Drs. Culver, Vandenburg and Sladen are charged with the responsibility of providing the speakers for that general meeting.

On the first evening there will also be a general meeting for the discussion of medical economic problems and for which some nationally known speaker will be invited.

This plan promises to provide a splendid, attractive and interesting program for our annual meeting and one which will arouse wide interest. Further details will be imparted in subsequent issues. Just now, mark the dates—September 9, 10 and 11.

The Secretaries Conference was attended by twenty-one secretaries and six members of the Council. A complete stenographic report of the papers and discussions will appear in the June issue. The County Secretaries Association was re-organized and Dr. F. C. Kinsey of Kent was elected President and Dr. G. J. Curry of Genessee was elected Secretary.

In the evening, those attending the conference and the members of the Kalamazoo Academy attended a dinner. There were some 175 doctors present. After the dinner Dr. Morris Fishbein, Associate Editor of the Journal of American Medical Association spoke on "Mirrors of Medicine." Dr. Abt, Chicago, Professor of Pediatrics, Northwestern University, read a splendid paper on "Collapse in Infants."

MIRRORS OF MEDICINE

This was the title of the offering that was presented at the Kalamazoo Conference by Dr. M. Fishbein, Associate Editor of the Journal of the American Medical Association. During its presentation we were very much concerned that a large number of the audience would bring onto themselves a rupture of their cerebral vessels from convulsive laughter that was provoked by the humor of the speaker.

Dr. Fishbein's portrayal of the old-time doctor, the specialist, surgeon, roentgenologist, urologist, obstetrician, gynecologist, neurologist and a few more prototypes of our modern medical subdivision representatives was resplendent with humor, pathos, sarcasm, criticism, and honor and realistically portrayed their foibles and fancies, their eccentricities and grandeurs, their merits and demerits. All readily perceived from his word pictures friends and enemies of present and past acquaintanceship.

It was humorous, and was so intended, yet it contained much for thought. Would that more of our representative men would unbend and give to us similar contributions. There is room and need for more humor in our mingling. There is and can be only one Fishbein, but others might emulate him as far as possible, for it is good to see ourselves from the ludicrous angle we often assume in our public and professional posing.

Necessarily for presentation at a meeting the offering was curtailed in length. We would all welcome it in book form with additions that are pertinent. From Dr. Fishbein's pen it would then equal "Mirrors of Downey Street" and "Mirrors of Washington."

THE TRAINED NURSE

In a recent issue of a well known nursing journal we read an article that contained this striking statement: "The nurse is no longer the servant of the doctor. Her's is a distinct profession." Think it over.

To the observer there will be apparent that there is a movement gaining headway that seeks to place the nurse before the public in the light of a distinct entity and endows her with super knowledge, ability and prestige. That movement seeks to sever the inter-dependence of doctor and nurse and purposes to create for the members of the nursing profession an independent place in our hospitals, clinics and sick chambers.

It is time that we were beginning to think straight on the subject. It is time that a halt be called on the "heroics," "sob-stuff," "martyrdom" and sentiment that has been injected in the arguments advanced by the proponents of the movement. We are therefore glad to be able to publish in this issue an article by Dean Cabot on the Interdependence of Medicine and Nursing. We

want you to read this article. We want you to think and we urge that you take up the problem in your own hospital and training school. There is a solution and that solution must be attained without creating an open rupture between doctors and nurses. The solution also must be made to conform to the requirements of medical men.

One thing is certain that if nurses continue to stress the importance of limited hours of duty at so much per "union hour day," they cannot hope to dignify their work with the term profession. They then retrograde themselves into a "trade" and surrender their purpose of service. Service cannot be limited by "hours at so much per" and retain its claim of unselfish service for the aid of suffering man.

Editorial Comments

The following, extracted from the Harper Hospital Bulletin, should characterize the basis upon which charity service is rendered. Sentiment alone, a quest for numbers and acceptance of cases regardless of their financial status, should be strenuously discountenanced:

It is of vital importance to know the economic status of those to whom this vast amount of service was rendered. No question is asked concerning the individuals who are beneficiaries of relief and social agencies, such as Mothers' Pension, Children's Aid Society, Juvenile Court, etc., to which class about one-third of our patients belong. It is concerning those who are wage earners that we must answer many legitimate questions. What is the standard by which the admission officer passes on applicants for admission? Or in other words, what guide is used by the admission officer to determine whether an applicant's income allows for medical care through the services of a private physician or permits of his eligibility for admission to the clinic? What amount is necessary in Detroit to cover the basic necessities of food, clothing and shelter? What is the average wage earned in Detroit? There is issued quarterly by the Detroit Visiting Housekeepers' Association, a minimum budget which is recognized by all agencies of the city. This budget is used by the admission officer as a gauge for admission. The budget issued December 1923, for the first quarter of 1924 is as follows:

Minimum Family Budget (*per month*)

	Man and Woman	Man, Woman, Child 3	Man, Woman, Girl 15 Boy 3	Man, Woman, Girl 12, Girl 5, Boy 3
Food	$24.60	$29.69	$35.21	$42.23
Clothing	16.35	20.27	24.74	29.09
Rent	25.50	25.50	36.00	45.00
Household Furnishings	6.24	7.17	8.10	9.02
Fuel and Light	10.05	10.05	12.19	12.94
Extras	5.00	5.67	6.34	7.01
Total	$87.74	$98.35	$122.58	$145.29

Taking our most representative industry in Detroit, namely the automobile industry, to obtain a figure of the average wage, the U. S. Bureau of Labor Survey states: "The average Michigan automobile auto worker, excluding executive employees, clerks and power house men, receives within a few cents of $6 a day for a 50 and 2-10ths hour week. The exact figure is $35.49 a week, obtained by dividing the total amount of wages paid by the total number of employees.

Corresponding figures in tire industry are $36.68 a week.

The average number of days worked is 283.

The budget figures, of course, are based on a year's continuous income. In considering the family income the admission officer must recognize that while some incomes are far above the minimum budget, they may have been greatly reduced during the year by sickness, death, or unemployment, making clinic attendance necessary.

For a detailed study of the incomes of those admitted to the clinic the following tabulated chart for the month of June, 1923, as representative of any month, is offered.

322 new cases during June, 1923.
155 of these were referred in by social agencies.
167 cases from wage earning class (79 of these listed as unemployed).

Members of Family Group (Dependent on One Wage Earner)

Amount of Weekly Income	Man and Wife—No Children	Number of Dependent Children—17 years and under							
		1	2	3	4	5	6	7	8
Unemployed	13	10	6	7	5	1	0	0	0
$20 per week or less*	4	8	2	2	0	0	0	0	0
$24 per week or less*	4	6	6	2	2	0	1	1	0
$28 per week or less*	7	7	5	4	3	2	0	0	0
$32 per week or less*	3	8	7	4	5	1	1	0	1
$36 per week or less*	0	1†	6	9	4	1	1	3	1
$40 per week or less*	1§	1†	4‡	0	1	1	1	0	0
$40 per week or more	0	0	0	0	0	0	0	1	0

*Or less means between the amount starred and the preceding amouunt.
§Previously unemployed 6 months.
†Both cases from Probate Court.
‡Families heavily in debt due to illness in families.

Single Independent Individuals

Amount of Weekly Income	Men	Women
Unemployed	34	13
$10 per week or less*	0	12
$14 per week or less*	0	6
$18 per week or less*	1	5
$22 per week or less*	2	3
$26 per week or less*	0	0
$30 per week or less*	0	0

*Or less means between the amount starred and the preceding amount.

In the hurry of our present day lives, the demands of each day and week are so exacting that little time remains for reflection or consideration of the future. We automatically drop into the habit of simply concerning ourselves with the present and resignedly adopt an attitude of letting the future take care of itself. We give little thought as to where our present practices will land, we give scant heed as to what present policies will establish as fixed principles a few years hence and we are negligently content to let those who are to follow us, meet and solve the problems of tomorrow. That is the indictment that may be written against us doctors today. Especially is that true in regard to our hospital, dispensary and clinic practices of today. We are fostering dependency and discouraging independency of the individual.

Strong people build strong nations. Weak people tear down nations. This country was not founded by individuals who were the beneficiaries of pensions and whose children were born under paternalistic governmental care. This nation was not established by men and women who did not exert themselves to provide for their personal wants and needs. They were not sought out by social workers who herded them in groups into clinics or who provided them with mothers' pensions and inspired them to lessen their personal efforts and if physical ailments overtook them, placed them in hospitals and clinics without fee.

Charity we must do and always expect to do. But charity that condones or inspires dependency and squelches individuual responsibilities is bound to eventually lead us into trouble. England now has over a million people who receive and live on their government doles. Do we want that in America?

Collier's Weekly has just completed a series of three articles on Diploma Mills and Fake Doctors. They are full of instruction to the public and desirable educational articles. We are appreciative of this assistance in presenting to the people the truth regarding medical education and scientific medicine. We commend Collier's Weekly to our members.

Joseph J. Devney, in a copyrighted article which we are taking the liberty of copying, has accumulated from 1,000 bankers and life insurance men this data on over 20,000 individuals and realistically sets forth what happens to the average doctor financially. We are eager to have our members become familiar with his conclusions:

The practice of medicine is distinguished by several commendable characteristics. It is one of the oldest professions, it is essentially humanitarian, its standard of ethics is high and its members persist in it with remarkable unanimity.

This latter fact makes a record of their financial rise and fall unusually interesting and instructive.

On the average, doctors in their twenties are worth comparatively little. As they are just getting started, and in many cases have to repay the expense of their education, they have little opportunity to accumulate.

Their rise from twenty-five to thirty-five is rather gradual. This does not mean that the average doctor is not considerably more prosperous in his thirties than in his twenties, but that he does not accumulate a great deal more. One outstanding reason for this is that it is policy for doctors to maintain a good standard of living. This requires the expenditure of a considerable portion of their income during the early years of their practice.

PROSPERITY PEAK

During his forties, the average doctor accumulates rapidly and reaches the peak of his prosperity.

Of all the large groups of professional and business men, the doctor reaches his prosperity peak earliest, hence his financial decline begins earliest. If he could only keep up the pace in his fifties that he has in his forties, he would become a financial giant. But there are forces which militate against this.

THE DECLINE

The decline after the peak has been reached is rapid until fifty-five; from then it is rather gradual, showing that the average doctor is about set financially, beginning with his sixties.

The reason the average man goes down financially in his later years is because more are slipping back than going ahead.

Probably the main reason for the doctor's early decline is the nature of his work. During his early professional life he leads a strenuous existence. Broken rests, long vigils, nervous strains and irregular meals make him slow up sooner than men in other professions.

Furthermore, medicine is a progressive science and after a doctor has been out of college twenty-five years, *unless unusually studious,* he is not so well equipped with modern methods as the more recent entrants into the profession, and is likely to be supplanted by them in many cases.

Practice increases his skill, but the average doctor probably develops more from his early practice than from his later experiences. The older men become in all lines the more set they are in their ways of doing things and the less apt they are to adopt innovations.

When the doctor begins to make money fast, the tendency to increase his standard of living is accentuated. Then when he begins to slow up physically this eats into his accumulations as he is reluctant about lowering his standard. Unlike a manufacturer or a merchant, he cannot build up an organization which, with his direction, can make money for him and thereby offset his impaired earning power.

Another thing, since the professional man marries later than the average, his family expenses are greatest during his fifties, when his children are in high school or college, or both.

THE MALE CLIMATERIC

A careful compilation of reports on thousands of men engaged in various occupations appears to verify the theory that men experience a change of life which in many instances lessens their efficiency temporarily. Since the doctor must be mentally and physically fit to keep his practice up to the standard, a letting up for a period of from eighteen months to three years, or longer, as some physicians claim to be the time for the change to take place, is likely to show a decrease in his practice, hence in his income.

Judging from the economic results in many occupations, this change occurs most frequently in the late forties. This would reflect the result in the doctor's assets in his fifties, for when a doctor slips, he does not "come back" as easily as a business man. If people lose confidence in him, they will be slow to patronize him again. It is somewhat like starting over.

Another telling factor in a doctor's financial decline is bad investments. This is no reflection on his ability. It results from the nature of his occupation. As he does not need capital in his work, as business men do, he frequently invests in other people's enterprises. And too often "the other fellow" does not make good.

There are many safe business enterprises. But those which are safe today may be shaky tomorrow. Therefore, they must be watched. And the doctor who is a professional man first, and makes a success as such, has little time for outside business cares and investigations.

A FINANCIAL PROGRAM

Since it is a demonstrable fact that the average doctor makes many times as much from his practice as he does from his investments, a profitable policy for him to pursue is to deposit a good share of his annual surplus where it will require no attention on his part, yet be safe and yield a profit.

An ideal medium is life insurance. By taking a substantial block of it, he creates an immediate estate or income for his family, he provides for his own old age and leaves himself free from business cares and worries. By devoting his working time to the practice of his profession and his spare time to study and recreation, he will lead a more profitable and satisfactory life.

DOCTORS' WIDOWS

Another evidence of the advisability of doctors following some such program is the fact that *more than half the widows of doctors are either dependent or working from necessity.*

State News Notes

Born, a son, to Dr. and Mrs. E. C. Baumgarten, Detroit.

Dr. F. C. Warnshuis, Grand Rapids, will address the Missouri State Medical Society at its Annual Meeting in Springfield, Mo., on May 7th.

Dr. R. J. Hutchinson, Grand Rapids, spent ten days in April at his camp in Northern Canada.

Walker Brown, an unlicensed drugless practitioner of Stanton, Michigan, was convicted in the Circuit Court of a violation of the Michigan Medical Practice Act, and sentenced to serve a term of imprisonment in the county jail of four months, with a fine of $100. If the fine is not paid within this time, then the term of imprisonment is to be continued, not to exceed six months in all. Dr. Beverly D. Harison, Secretary of the Michigan State Board of Registration, was called as a witness in this case.

J. F. A. DeJordy, an unlicensed chiropractor of Boyne City, Michigan, was found guilty of violating the Michigan Medical Practice Act and sentenced to sixty days in the county jail, with $100 fine and costs in the amount of $100; in default of payment of such fine and costs, he is to remain in the county jail an additional four months, or until such fine and costs are paid.

This was the second case brought against DeJordy, the first resulting in a verdict of not guilty, although the judge had instructed the jury to convict.

The following officers were elected at the spring meeting of the Michigan Trudeau Society: Presiddent, Dr. J. W. Toan, Howell; Vice-President, Dr. W. H. Marshall, Flint; Secretary-Treasurer, Dr. William Vis, Grand Rapids.

The American Medical Association's Annual Meeting will be held in Chicago the week of June 9th. If you have not made your hotel reservations we urge that you do so at once.

Dr. F. B. Tibbals, Detroit, was unable to address the County Secretaries' Conference because of illness. Dr. Tibbals is willing to accept invitations from County Societies, insofar as possible, and speak on Medical Defense.

County Society News

JACKSON COUNTY

The annual meeting of the Jackson County Medical Society was held at the Foote Memorial Hospital, Dec. 13, at which time the following officers were elected:

President, Tohmas E. Hackett, M. D., Jackson; Vice President, R. M. Cooley, M. D., Jackson; Secretary, Don F. Kudner, M. D., Jackson; Treasurer, L. J. Harris, M. D., Jackson.

This meeting was followed by a dinner dance at the Jackson City Club. Mr. E. R. Young was the principal speaker on an excellent program.

The January meeting was an informal one, held at the Hayes Wheel Club at Round lake. There was no program as the meeting was purely social.

On Feb. 16th Dr. A. J. Ochsner of Chicago was the guest of the society and gave a splendid paper on "Osteomyelitis." Many visiting physicians from the surrounding counties were present.

The March meeting was held at Mercy Hospital and the subject of the evening was, "Diseases of the Thyroid Gland." Dr. Deacon of the State Board of Health told of the results of the goitre survey in Michigan. Dr. Frederick Coller, Assistant Professor of Surgery at the University of Michigan, talked on the "Surgical Aspects of Thyroid Disease."

D. F. Kudner, Secretary.

HILLSDALE COUNTY

The regular quarterly meeting of the Hillsdale County Medical Society was held at the Mitchell Library on Tuesday evening, April 8th at 7:30 p. m. In the absence of the president, the vice-president, Dr. E. C. Bechtol, took the chair.

Minutes of the Annual Meeting were read and approved. Dr. Bechtol then introduced the speaker of the evening, Dr. Harry B. Knapp of the sanitarium, Battle Creek, who addressed the Society on the subject, "Orthopedic Surgery in General Practice."

Dr. Knapp took up the following topics in order:

1. Un-united Fractures.
2. Stiff Joints.
3. Haemophilia in Joint Disease.
4. Paralysis following Poliomyelitis and Similar Cases.
5. Sub-acute and Chronic Arthritis with Exudation, especially of the Hip.
6. Synovitis.
7. Chronic Regional Arthritis caused by Focal Infections.
8. Tuberculosis of Spine.
9. Spastic Paralysis.
10. Non-Tuberculous Osteo-Arthritis of the Hip Joint.
11. Dislocation of the Semilunar Cartilage of Knee.
12. Congenital Dislocations of the Hip Joint.
13. Scoliosis (non-tubercular).
14. Strained, weakened and flat feet, with causes and best treatment of such feet.

Dr. Knapp dwelt briefly, but as comprehensively and clearly as possible, on the causes, diagnosis and treatment of the foregoing and one or two other classes of cases which are most likely to arise in the work of the general practitioner. He pointed out some of the pitfalls into which the physician may readily fall if unfamiliar with such cases, and how best to avoid them.

Dr. Ball of Reading, presented a case of scoliosis of spine with malnutrition and deficient development in a child of 18 months; also a case of diseased hip joint which could not be diagnosed without the X-ray.

In the absence of the gentlemen assigned to discuss the address, an informal discussion was held. Dr. Knapp was given a rising vote of thanks for his most valuable and interesting address, which, unfortunately, was heard by so few.

There were present at this meeting the following physicians, members of the Society:

Dr. Green, Dr. Sawyer, Dr. Miller, Dr. Frankhouser, Hillsdale; Dr. Yeagley, Br. Barnes, Waldron; Dr. McGFarland, N. Adams; Dr. Bell, Dr. Fenton, Reading; Dr. Oliver, Camden; Dr. Bechtol, Montgomery.

It is certainly to be regretted that so able and timely a lecture should have been heard by so few. The subject covered by Dr. Knapp is one of constant and anxious interest to every general practitioner and one not well covered in the text books.

The committee on Legislation and Law Enforcement reported that the chiropractor doing business without a license at Reading will be indicted within a day or two.

The Society then adjourned.

D. W. Fenton, Sec'y-Treas.

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Original Articles

ASCITES: REPORT OF SEVERAL INTERESTING CASES

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Within the past three years there have been in the wards of the University Hospital a number of cases of ascites which are not due to the ordinary causes, or which have presented features somewhat out of the ordinary. Cases such as the selected ones here reported fall under the care of most practitioners at one time or another and present problems which baffle even the expert diagnostician. Among the cases, five have been selected because of some particular feature or features.

Fluid in the abdomen is a common finding in many cases in the doctor's practice. The peritoneum lends itself admirably to the transudation or exudation of fluid and to the absorption of that fluid. It is a very vascular membrane, covered with epithelial cells lining the largest cavity of the body. There is always a small amount of moisture on the surface and on the great omentum which hangs like an apron from the transverse colon, but there is rarely any demonstrable free fluid. The whole peritoneum may act as a huge absorbing surface, but it is generally believed that the peritoneum upon the under surface of the diaphragm absorbs fluid most rapidly. Allbutt and Rolleston say, "The diaphragm contains a rich and complex system of lymphatics so disposed among the bundle of fibers that the contraction and relaxation of the diaphragm exercises a pumping action, whereby a constant current of fluid is drawn up from the peritoneum and passed into the thoracic duct and retrosternal lymph nodes."

Bolton did a great deal of work on the question of absorption from the peritoneal cavity and showed that it was drained principally into the retroperitoneal lymphatics. The drainage was accompanied by purely mechanical processes, force being supplied by respiratory movements. Some colloids and poisons diffuse directly into capillaries.

Leathers and Starling concluded that water was absorbed by osmosis and salts by diffusion. By destroying the endothelial cells with sodium fluorid and by scalding, it was shown that these cells had no active part in the process of absorption. Thus, according to their views, substances to be taken up by the capillaries must be diffused through the capillary walls, and must not exist in the same concentration on both sides of the membrane.

In health the transudation and absorption takes place at a uniform rate.

The peritoneum must necessarily be very resistant to bacterial infection, when we consider the numerous sources of possible infection. There are the intestines filled with bacteria, besides possible infection from the gall bladder, Fallopian tubes, uterus, urinary bladder and its own rich blood supply. This rich blood supply, of all the structures in the abdominal cavity, gives to this membrane, the peritoneum, great powers of combatting infection chiefly in two ways (1) by the outpouring of serum, itself a protective mechanism, and (2) by the escape of great numbers of phagocytes, large mononuclear cells which engulf offending bacteria. Fibrin is also early found in any inflammatory reaction which tends to glue together the coils of intestines and thus to limit the spread of the infection, confining it to a comparatively small area among the loops.

In the production of ascites, the balance between the production and absorption of fluid is disturbed, resulting in the collection of free fluid in the cavity.

Transudates and exudates are the terms applied to collections of fluid in the serous cavities. There is no sharp dividing line between a transudate and an exudate. The underlying cause of the collection of fluid and a few laboratory tests are the means usually employed in differentiation. Clinically, the differentiation is often difficult, as the laboratory tests on a specimen of fluid may have some of the characteristics of both. In general we have considered a transudate to be serous in character, straw colored, a specific gravity lower than 1.015 and an albumin content of 2.5 per cent or less. The total cell count is usually less than 200 per cu.m.m. Exudates may be

serous, serofibrinous, hemorrhagic, seropurulent, purulent or chylous. The specific gravity is higher than 1.015, albumin content above 2.5 per cent and cell count above 200 per cu. m.m. The underlying cause of the ascites is also a factor in differentiation. When due to circulatory disturbances, the fluid has the character of a transudate. The term exudate is applied to accumulations of fluid of inflammatory origin.

The following case reports are illustrative of conditions causing ascites, with a brief discussion of some of the criteria used in the diagnosis of the cases.

CASE I.—SCIRRHOUS CARCINOMA OF THE STOMACH, CARCINOMATOSIS OF THE PERITONEUM, ACUTE HEMORRHAGIC FIBRINOUS PERITONITIS

Mr. R. R. (No. 4338) male, age 22, entered the University Hospital on January 11, 1923, complaining of swelling of the abdomen, slight dyspnea and weakness.

He felt perfectly well up to three weeks previous to entering the hospital at which time he noticed a pain beneath the right rib margin, especially on movements. Two weeks previous to entrance his abdomen began to swell, and it became more difficult for him to stand upright. His breath also was becoming slightly embarrassed. Up to the time of entrance he had had no pain in the abdomen, no history of cough, haematemesis or night sweats. Following the enlargement of his abdomen, he was unable to retain any food. He lost about 10 lbs. in two weeks and was becoming rapidly weaker.

As the patient had been a wanderer since childhood, he knew nothing in regard to his family history. One year ago he was struck in the abdomen which caused him a little inconvenience for a short time. He was a moderate user of alcohol and tobacco.

The gastro-intestinal history was negative up to the onset of his present illness.

He denied venereal disease.

PHYSICAL EXAMINATION

He was well developed but undernourished, and was of a long, slender type of build. He was very uncomfortable during the examination due to marked abdominal tenderness. His skin was pasty in color and coarse in texture. The pupils were normal. The teeth were in poor condition. The tongue was coated and the tonsils were large and reddened. There was slight enlargement of the thyroid gland. The right side of the throax was slightly more prominent than the left. Expansion was limited on the right side. The respirations were regular and normal in rate. The maximum impulse of the heart was diffuse and the apex beat could not be sharply localized. The left border was well outside the nipple line and could not be definitely determined. The right border dullness was 5 c.m. to the right of the mid sternal line. There was no thrill. There was a questionable diastolic murmur heard in the 3rd intercostal space at the border of the sternum.. The abdomen was markedly distended and presented the usual signs of ascites. Following tapping, there was visible pulsation of the aorta. There was marked generalized tenderness of the abdomen with muscle spasm. No masses were felt. There was general lymphadenopathy. Extremities and reflexes were normal.

LABORATORY FINDINGS

Blood Pressure 140/60, 134/90; Urine, amber; acid; sp. gr. 1.022; albumin, trace; sugar, negative; sediment, few hyaline casts and W. B. C. Repeated examinations were similar. Blood, Hb. 80%; R. B. C. 4,240,000; W. B. C. 15,400; differential P. N. 86%; S. L. 1%; L. L. 2%; M. 11%. Platelets, normal. Wasserman, negative. Ascitic Fluid, Straw; sp. gr. 1,017; ab. XXX, cells 1089 per cu. m.m.; differential; R. B. C. 79%; P. N. 5%; S. L. 19%; L. L. 5%; 400 cells counted.

Animal Inoculation was negative for tubercle bacillus.

X-ray Examination of the lungs showed emphysema of right lung.

COURSE

At entrance T. 98.6°, P. 88, R. 22. The temperature was continuously normal. The abdomen was tapped four times during his stay in the hospital. Emaciation progressed rapidly. He became unable to retain food and the abdominal pain became very severe. A laparotomy was performed under local anaesthesia. The parietal and visceral peritoneum were found leathery in texture. No tubercules evident on either surface. The intestinal coils were firmly adherent. Retroperitoneal glands were enlarged. Enterostomy was performed with difficulty. A small piece of peritoneum was excised for pathological study which was reported as carcinomatosis. Death occurred a few hours after operation and an autopsy was performed.

AUTOPSY REPORT

Primary diffusely infiltrating carcinoma scirrhosum of the stomach. Generalized carcinomatosis of the peritoneum. Hemorrhagic fibrinous peritonitis.

DISCUSSION

A rather striking feature of this case is the occurrence of carcinoma of the intestine in a young adult of 22 years of age. One sees a few cases of this character in a large clinic, but the percentage is very small. The fact that he felt perfectly well, three weeks before entrance to the hospital, without any previous gastro-intestinal history, was deceiving. Except for slight pain beneath the right rib margin, his first symptom was swelling of the abdomen, which came on suddenly, and was of short duration. With a malignant involvement of the peritoneum one would expect a hemorrhagic fluid, which was absent in this case. With the short duration, age of the patient, absence of any previous symptoms, practically negligible loss of weight, a non-hemorrhagic ascitic fluid of an exudative type and very little anemia, we believe one would be justified in making a provisional diagnosis of tuberculous peritonitis. Such a diagnosis was made in this case. In retrospect, however, there were one or two points to which possibly more attention should have been given. One was the total absence of fever. This point was brought up and it was thought that his manifestly se-

verely ill condition might account for this. The other was the peculiar boardlike abdomen. This, we thought, was due to matting together of the coils. Diffuse carcinosis never was considered, although as a bare possibility it should have been.

CASE II.—ASCITES, ACTIVE LATE SYPHILIS, SYPHILITIC HEPATITIS, SPLENITIS, AORITIS, AND ADRENALITIS—MULTIPLE GUMMATA IN PELVIC RETROPERITONEAL TISSUES

Mrs. E. W. (No. 4071) The patient, age 37, entered the University Hospital on December 14, 1922, complaining of weakness, gastric hemorrhages and swelling of the abdomen.

She dated her present illness to four years ago, following an attack of influenza. Her first symptom was palpitation. In April, 1922, she noticed some sharp pains in the lower abdomen, which occurred both during the day or night, had no relation to meals and were not associated with any urinary, menstrual or gastric symptoms. "Bloating" was noticed at various intervals, which she considered to be gas. There was no weakness noted at this time. Sixteen days previous to her entrance to the hospital she had 6 gastric hemorrhages in two days. Following the hemorrhages, she became weak, her abdomen became more distended, and the pains in the lower abdomen disappeared.

She had influenza in 1919. During the summer of 1922 she had had "cramps" in her legs and the calves of her legs had been "sore."

Her father died at 73 years of paralysis. She had two sisters die of "kidney trouble."

She was married the first time at the age of 19. Her first husband died of diphtheria. One child was born by this marriage which died in two weeks of a convulsion." Her second marriage was at the age of 34. Her second husband was living and well. There were no pregnancies from the second marriage.

PHYSICAL EXAMINATION

The patient was very much undernourished. She was uncomfortable during examination due to the ascites. Her head showed rather marked prominence of the frontal and parietal bosses. Her pupils were unequal and reacted rather sluggishly to light. There was marked engorgement of the veins of the neck. There was limited expansion of both lung bases. Heart was slightly enlarged with a heaving apex beat. There were numerous rough scratchy sounds over the precordium. There was a systolic murmur at the apex and over the aortic area. There was marked ascites at entrance. The examination following tapping showed the left lobe of the liver to be 5 c.m. below the costal border. The edge was sharp and the surface was smooth and tender. The spleen was easily palpable. The superficial abdominal veins were markedly enlarged. There was superficial generalized shotty lymphadenitis. The knee jerks were increased. There was slight edema of the ankles.

LABORATORY FINDINGS

Urine, at entrance: amber; acid; sugar, negative; albumin x x. Sediment: many W. B. C., few R. B. C., no casts. Urobilinogen x x. Repeated examinations showed practically the same findings. Blood: Hb. 28%, R. B. C. 2,160,000, W. B. C. 13,000. Differential: P. M. 73%; S. L. 17%; L. L. 3%; Trans. 2%; E. 2%. 3%. Blood platelets, normal. Wassermann x x x x.

Ascitic fluid: Sp. gr. 1.014; clear; straw; alb. 24 G. per litre; 450 cells per cu. m.m. Wassermann x x x x. Kahn x x x x. Animal culture was negative for tubercle bacilli.

Spinal fluid: clear, normal tension, globulin x, albumin x x, cells 4, Wassermann x x x x, Gold Sol. 0011100000, Mastic 322210.

Electrocardiographic tracing was practically normal.

X-ray of the chest showed uniform thickened pleura over the left chest. No parenchymatous lesions or fluid.

COURSE

The patient entered the hospital in very poor condition with marked ascites, anemia and distressed respirations. While in the hospital she had to be tapped on an average of every three days, approximately 8 quarts of fluid being removed at each tapping. While on the ward she received mercury by inunction and K. I. On the final day of her illness, she suddenly had a profuse gastric hemorrhage, followed in an hour by a second one. Her condition became progressively weaker with no pain or other symptoms. At 10 a. m. the following morning she had a third hemorrhage, following which she became comatose, not responding to further stimulation. At 2 a. m. she had a fourth hemorrhage shortly after which she died, death occurring 20 days following her admission. An autopsy was granted.

PATHOLOGICAL DIAGNOSIS

Active late syphilis. Syphilitic hepatitis, splenitis, aortitis, pancreatitis, adrenalitis, lymphadenitis. Focal leptomeningitis and multiple gummata in pelvic retro-peritoneal tissues. Chronic cholecystitis and choleangitis. Dilatation of hepatic and common ducts. Ascites. Chronic fibroid salpingitis.

DISCUSSION

The history of this case as outlined contains several interesting points. In the first place she dates the onset of her present trouble to an attack of influenza. In our experience in the hospital since the influenza epidemic, a large group of patients have dated the onset of complaints for which they entered the hospital to an attack of influenza.

With the history of palpitation for four years, following an acute infection, with the entrance findings of ascites and edema, one might have supposed that the patient was suffering from heart failure. This is the condition for which the patient was treated before entrance to the hospital and before she began to have severe gastric hemorrhages. In the presence of a huge ascites with severe gastric hemorrhages, one's attention is immediately centered on the possibility of cirrhosis of the liver, and after a close examination of the pupils, the probability of syphilis being the causative factor is suggested. This is borne out in this case by the serological tests on the blood and spinal fluid.

A rather striking feature of syphilis of the liver is the relatively large size of the left lobe, which often occupies the whole epigastrium and can be seen as a bulging tumor mass projecting from below the xyphoid process. The

very striking improvement in most cases of syphilis of the liver following the administration of mercury and K. I. was not present here. Evidently the cirrhosis had gone too far, the circulation had been too severely altered and before any benefit could result from specific treatment her varicose collateral veins in the stomach gave way. This is not an uncommon mode of death in the cases of severe cirrhosis, whether portal or syphilitic in type.

CASE III.—POLYSEROSITIS, MILLIARY TUBERCULOSIS

Mrs. N. L. (No. 5124). The patient, age 31, entered the University Hospital, March 26, 1923, complaining of bloating of the abdomen and a weak heart. The patient had an attack of "influenza" about February 1st, 1923. She was quite ill in bed for two weeks. Following this she was up in a chair and out in the yard on one or two occassions during the next succeeding two weeks. The first week in March, her abdomen began to "bloat," before she had regained her strength from the influenza. The condition progressed gradually. She has had dyspnea on exertion since childhood which has been rather exaggerated since the age of 23. She has had severe cough for three years, but no haemoptysis. Her appetite was poor since the onset of her present illness. She has vomited frequently. She has always been very nervous. Her best weight was 160 lbs. in November, 1922. Her present weight was 134.

The family history was negative.

Her husband was living and well. She had two children living and well. She had had one attack of tonsillitis two years ago.

PHYSICAL EXAMINATION

She was of small stature, underdeveloped and undernourished. There was a flush over the malar regions of both cheeks. Her pupils were normal. Her respirations were shallow due to fluid. The cardio-hepatic right angle was obliterated with marked dullness extending out into the right chest about 7½ c.m. from the mid sternal line. The left border could not satisfactorily be determined. There was a soft blowing systolic murmur at the apex. There was dullness at the bases of both lungs with some dullness and fine crepitant rales at the right apex. The abdomen was markedly distended with all signs of fluid. Following abdominal paracentesis, the liver was found to be enlarged. There was no edema of the extremities.

LABORATORY EXAMINATION

Urine: clear; amber; acid; sp. gr. 1.032; albumin, negative; sediment 30-40 W. B. C. to low power field, occasional granular casts. Blood: Hb. 68%; R. B. C. 4,410,000; W. B. C. 3,400; differential: P. N. 80%; Eosin. 1½%; S. L. 9%; L. L. 7%; Trans. 3%. Blood Pressure 106/76. Wassermann, negative.

Ascitic Fluid: cloudy; yellowish brown; sp. gr. 1.018; albumin, 16 G. per litre; 850 cells per cu. m.m., mostly small lymphocytes. Wassermann, negative.

Pericardial Fluid: Straw; sp. gr. 1.022; 3,800 cells; albumin, 50 G. per litre.

Animal inoculation was positive for Koch bacilli on the ascitic and pericardial fluids.

X-ray of chest: Large cardiac area with chronic lung infection, probably tuberculous.

COURSE

The patient entered the hospital in very poor condition. Her temperature ranged between 101° to 103°. H. R. from 110 to 130 and respirations from 15 to 35. An abdominal paracentesis was done on two occasions with 11,000 c.c. of fluid removed. The pericardium was tapped on one occasion obtaining 330 c.c. The patient failed rapidly and died May 25, 1923.

AUTOPSY FINDINGS

Fibrinous pericarditis, perisplenitis, Plastic tuberculosis peritonitis. Milliary tuberculosis of lungs, spleen and liver.

DISCUSSION

The onset of the serositis had a direct relation to a previous attack of influenza. She undoubtedly had a chronic tuberculous process previous to the attack of an acute infection. One might be lead to consider the possibility of a cardiac lesion during her early life with a resultant Pick's syndrome following the acute infection.

There was nothing so unusual in the examination of the heart to lead one to believe that cardiac disease was the primary lesion. On the contrary, there were definite signs of pulmonary tuberculosis and the diagnosis was made during the life of the patient. Cases of a chronic form of serous membrane thickening adhesions and collections of fluid in the serous cavities, usually, but not always beginning as an adhesive pericarditis, are known as Pick's syndrome and are considered to be of tuberculous origin. This case was a frank serous membrane tuberculosis with general milliary tuberculosis in all probability having its origin in the lung infection. In no sense could this be called Pick's syndrome; howevevr, it might be considered an argument for the probable nature of the chronic slow growing process which has Pick's name given to it.

CASE IV.—CHRONIC PERITONITIS—ETIOLOGY NOT DETERMINED

Mrs. A. (No. 4074). This patient, age 27, entered the University Hospital on December 14, 1922, complaining of swelling of the abdomen.

In July, 1922, following the normal delivery of a full-term pregnancy, she noticed a slight fullness of the abdomen associated with slight backache but no other symptoms. The increase in size was very gradual until October. At this time she had a sudden onset of crampy pains in the right lower quadrant which became much worse on movement. The pains disappeared during the night, but on arising in the morning her abdomen was so distended she was unable to put on her clothing. She had no gastric or urinary disturbance.

She had typhoid at the age of 16 and influenza at 22. She was jaundiced one year ago accompanied with pain between the scapulae and accompanied by headache. The jaundice cleared up rapidly.

Her father died at 58 of "dropsy." One brother died of "water on the brain."

She has two children living and well and there were no miscarriages.

The cardio-respiratory, genito-urinary and catamenia histories were essentially negative.

PHYSICAL EXAMINATION

She was well developed and nourished. Her mental state was normal. Her skin showed a subicteric tint and slight malar flush. Her pupils were normal. The mucous membranes were normal. There was a marked tremor of the tongue on protrusion. The tonsils were enlarged and red. There was slight enlargement of cervical lymph glands. The thorax was symmetrical and the respirations were normal. The heart was normal in size. There was a systolic murmur heard along the left border of the sternum. The radial pulses were regular and equal; the rate was 88. The lungs were normal. The abdomen was distended and symmetrical. There was marked tenderness in the upper right quadrant and slight tenderness in the upper left quadrant. No masses were felt. There were typical findings of ascites. The extremities were normal.

LABORATORY EXAMINATION

Urine: straw; acid, sp. gr. 1.020; albumin, negative; sugar, negative; sediment, negative. Repeated examinations similar. Blood: Hb. 65%; R. B. C. 5,030,000; W. B. C. 9,000 differential: P. N. 59%; Eos. 2%; L. L. 8%; S. L. 19%; M. 12%. Wasserman, negative. Spinal fluid: clear, normal tension, globulin x, albumin x x, cells 35. Wassermann, negative. Animal inoculation, negative for Koch bacilli. Ascitic Fluid: sp. gr. 1.022, 1,800 cells per cu. m.m. 900 W. B. C., albumin 32 G. per litre. Blood pressure avraged 100/70. T. P. R. normal throughout stay in hospital.

The gastro-intestinal X-ray was normal. Electrocardiogram was normal.

COURSE

Due to suggestive pupillary findings in the patient's husband, although his blood Wassermann was negative, the patient was placed on a course of potassum iodid and mercury inunctions without apparent improvement. As the fluid continued to accumulate slowly following tapping, she was placed on 20 grams of calcium chloride daily with some apparent benefit. There was a gradual increase in her urinary output with gradual diminishing ascites. She was tapped a few days previous to her discharge from the hospital and no fluid was obtained. She was discharged from the hospital without any findings of ascites but rather weak. She was advised to remain on a salt poor diet for a period of time as it was demonstrated that it tended to increase her ascites. We have had several communications from the patient in which she states that she is feeling perfectly well and carrying on her usual routine housework.

DISCUSSION

According to Allbutt one is occasionally confronted with a case of ascites in which the etiological agent is suspected only by the process of exclusion. The condition having followed the normal delivery of a child, would naturally lead one to suspect that the ascites bore some relation to this event. We were slightly suspicious of possible pathology in the kidneys, due to the history of onset and the patient's general appearance. This was ruled out very readily by repeated urine examinations.

In studying the case, our attention was especially directed to the appearance of the patient's husband. His pupils were definitely unequal, although they reacted quite normally to light. We made a thorough study in respect to syphilis, the results being negative. The only positive finding during the studies was an increase in solids and cells in the spinal fluid for which no explanation was given. Due to our early suspicions of syphilis, she was placed on potassium iodid and mercury. The administrations of large doses of calcium chlorid had some apparent effect. For no known reason the ascites gradually disappeared. The patient left the hospital without any evidence of her former condition. One might speculate on the effect of the potassium iodid and mercury. We were inclined to consider that the patient had a chronic localized peritonitis following the delivery of her child, the condition gradually subsiding. As we have been able to follow the case and find that she has remained entirely well for a period of one year, we are more inclined to this diagnosis.

CASE V.—SYPHILIS—SYPHILITIC CIRRHOSIS OF THE LIVER; GUMMATA OF THE LIVER: PERISPLENITIS; PERIHEPATITIS; ASCITES

Mrs. K. W. (No. 3773.) Patient, age 29, entered the University Hospital, November 17, 1922, with the chief complaint of swelling of the abdomen. She noticed this swelling six years ago which was relieved by limiting fluids and taking diuretics. The swelling reoccurred four years ago and a third time in January, 1923.

Each time the ascites was controlled by limitation of fluid and by taking diuretics. After the ascites disappeared in January, she noticed a tumor appeared below the right costal margin which was slightly tender to pressure. She began to have slight nausea and vomiting. Her bowels were regular. She had had frequent fainting attacks and in July, 1922, her gall bladder was partially removed at another clinic. The removal was not completed as the gall bladder was partially adherent to the liver. Her appendix was removed at the same time. She was informed after the operation that her spleen and liver were enlarged. On this occasion limited fluid intake and the use of diuretics had no effect in reducing the ascites. She was tapped in August, 1922 and 12½ quarts of fluid were removed. She was tapped 14 times previous to her enrance to the University Hospital, the interval between tappings being 5 to 10 days. About 110 quarts of fluid were obtained. Her stools were never tarry, but had been light in color. She has had severe sharp pains in the upper right quadrant. She has never been jaundiced. She states that several blood examinations were negative for syphilis. This was confirmed by her husband.

She was married six years. There were no pregnancies. She has had frequent night sweats for several years. There was no cough. Her appetite was fair. She menstruated regularly up to the time of her operation in July, 1922. Her menses ceased following this operation. She has had marked dizziness and fainting spells and has complained of "sudden transient paralysis" of the right arm. Her average weight was 136 lbs. Her present weight 121 lbs.

Her father died at 39 of heart disease. One brother died at 17 of "dropsy."

PHYSICAL EXAMINATION

The patient was uncomfortable during the ex-

amination due to pain in the abdomen. Her pupils reacted sluggishly to light. The apex beat of the heart was not seen or felt. The left border was 10 c. m. to the left of the mid sternal line; right border was beneath the sternum. There were on murmurs. The aortic second sound was slightly accentuated. The lungs were negative. The abdomen was very prominent; the enlargement was symmetrical, extending from the xyphoid to the pubis and there was bulging in the flanks. There was a firm, irregular tender tumor in upper right quadrant, which descended on respiration. The spleen was not palpable. There was a small shotty adenitis of the neck, axillae and groin glands. There was slight clubbing of the fingers. There was slight edema of the legs, most marked at the ankles.

LABORATORY EXAMINATION

Urine: The examination was done on numerous occasions. The specific gravity ranged from 1.018 to 1.033; albumin, negative; sugar, negative; sediment, negative. Blood: Hb. 95%; R. B. C. 5,280,000; W. B. C. on 11/21/22 was 23,400; on 11/22/22, 11,000; on 11/23/22, 10,400 and on 11/28/22, 9,200. Differential count at entrance: P. N. 75%; S. L. 2%; L. L. 22%; Mono, 2%; Baso. 2%. Platelets, normal. Wasserman x x x x. Blood pressure 104/82. Urobilinogen, negative.

Ascitic fluid: Sp. gr. 1.008; straw; 40 cells; albumin 15 G. per litre. Wassermann x x x x.

COURSE

The patient entered the hospital with the complaint of rapidly occurring ascites and some pain in the upper right quadrant. During her eight month's stay in the hospital her abdomen was tapped 38 times and 149½ gallons of fluid were removed. This combined with the 28 gallons obtained before admission to the hospital makes a total of 177½ gallons of fluid removed. In spite of her rapidly reoccurring ascites and long stay in bed, the physical condition of the patient remained good, her general condition being practically as good immediately before death as when she entered. Due to the finding of the positive Wassermann. she was placed on mercury by inunction and potassium iodid. Her treatment falls roughly in three periods. The period of mercury and potassium iodid was continued for about two months. In January, 1923, she was given calcium chlorid 12 grams daily by mouth with the hope that it might have some effect on delaying the accumulation of the fluid. This was continued 12 days without effect and the patient refused further treatment. She was also placed on a regime of the various diuretics without effect. She was never free from severe pain more than 1 or 2 days at a time and required morphine to control this. There was a very short period soon after entrance when codein by mouth and placebo hypodermics had some effect. Due to the fact that there was very little change in her physical findings and the interval between tappings was unchanged, it was thought worth while to do an abdominal exploratory operation in the hope of offering some benefit. She was operated June 13th, 1923. She was found to have typical nodular gummatous liver with marked perihepatitis. The liver was adherent laterally and superiorly and there were numerous adhesions between the intestines and parietal peritoneum which were limited to the upper half of the abdomen. There were no adhesions in either of the quadrants corresponding to the point where the trochar had been inserted. The spleen was moderately enlarged and adherent.

For the first few days after operation, the patient felt very well. Her ascites gradually returned and soon spontaneously drained through a stitch hole. About 10 days post-operative, she developed severe uncontrollable pain in the upper right quadrant and rapidly failed. She died 14 days post-operative. An autopsy was not permitted.

DISCUSSION

The effect of diuretics in the early history of the disease in this patient is interesting as previous to entrance to the hospital it led to a diagnosis of kidney disease with the idea that diuretics such as diuretin had its primary action on the kidney. It is well known that the ascites in early cirrhosis, especially syphilitic cirrhosis of the liver, repeatedly may appear and disappear spontaneously. Likewise, any therapeutic procedure which produces increase in fluid output may have a tendency to reduce the ascites over a limited period of time.

The formation of the fibrous tissue in the liver is relatively slow, which can well allow for the establishment of a collateral circulation. We feel that it is possible to assume that the periodical appearance and disappearance of ascites in early cases of this type can be explained on the theory that there is periodic establishment of collateral circulation until the fibrosis becomes so extensive that the circulation is permanently interfered with, thus causing a persistent ascites. The presence of small gummata with the formation of scar tissue in the process of healing will produce a similar picture.

The presence of congenital syphilis must be considered, although the age incidence would be rather unusual. Individuals with congenital syphilitic cirrhosis rarely reach the age of adult life. The fact that the patient denied any knowledge of having acquired syphilis cannot be considered too seriously, especially in a woman, as the primary lesion is usually painless, appearing and disappearing without any knowledge of its presence on the part of the patient.

A most striking feature in this case was the enormous amount of fluid removed and the fact that there was no local inflammatory reaction at the places of puncture. The loss of albumin in the fluid was great, never-the-less the patient did not emaciate in spite of the fact that she did not have a large appetite. She did not respond in the least bit to anti-syphilitic treatment. Here again, as in Case No. 2, the process had evidently reached a stage where fibrosis had replaced gummata. At times the shrinking of gummata and the development of fibrosis actually increases the ascites.

* * *

I am indebted to Dr. L. M. Warfield, Chief of the Department, for the privilege of reporting the cases and for many helpful suggestions.

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REPORT OF A CASE OF XANTHOMA DIABETICORUM; ITS RESPONSE TO INSULIN TREATMENT, QUESTION OF FAMILIAR TENDENCY

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This case is reported because of two important features associated with it; namely that of the cutaneous lesions occurring in both mother and son, and secondly, because

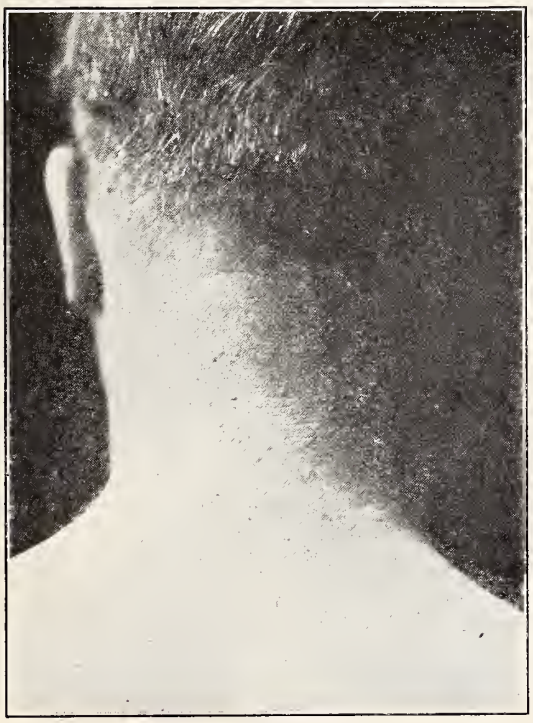

Fig. 1.

of its surprising response to insulin treatment. The eruption was diagnosed and confirmed by a histopathological study, which is reported in the case.

There is no doubt in our minds as to the relation of the xanthoma eruption to diabetes, however the close histological resemblance of Xanthoma Diabeticorum to the Xanthoma Tuberosum, should lead us to make a careful diagnosis of the lesions as they occur on the skin.

Xanthoma Diabeticorum is a cutaneous eruption characterized by somewhat erythematous papular and nodular elevations occurring first usually as scattered lesions; which, however, may group and become aggragated. The lesions are solid and firm in character, elevated and conical and consisting of a reddish base in their first development and later this fading to a pink. Some show a yellow tinge to the apex. The papules may be pierced by a hair, but it is not a follicular eruption. The lesions appear to have a predelection for the extensor surfaces of the forearm, the elbows, knees, the back and the buttocks and may be limited to these regions. However, no portion of the body appears to be free from the more

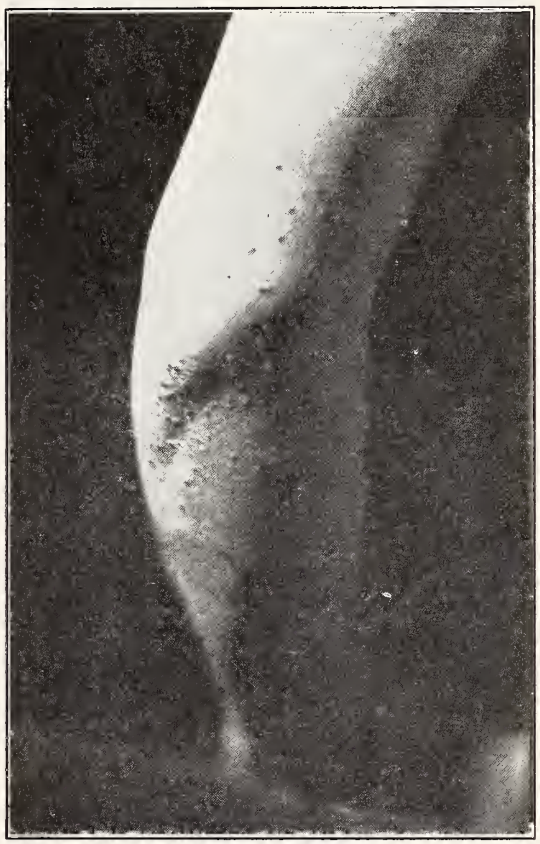

Fig. 2.

severe eruptions. In our case the eruption was limited to the areas of predelection. The eruption may occasionally be seen in the mouth.

There is often associated a variable degree of itching and burning which may be extremely troublesome to the patient. The eruption may completely disappear under

Fig. 3.

proper treatment for diabetes, but often the eruption is apt to show acession of new lesions with involution of some of the old ones, before disappearing entirely. They are often said to appear in streaks along the course of a cutaneous nerve supply. It appears much more frequently in men than in women and usually between the ages of 25 and 50, although several cases are reported of it having occurred in children. (1) There is also a case on record of it having occurred in a young individual of 17. (2) There is a particular tendency for it to occur in healthy, florid appearing individuals, however, we have a case on record of it having occurred in a young male who did not tip the scales over 100 pounds. We were unable to report this case as the individual appeared in our office in 1922 and refused to follow the diabetic regime. Insulin was unobtainable then.

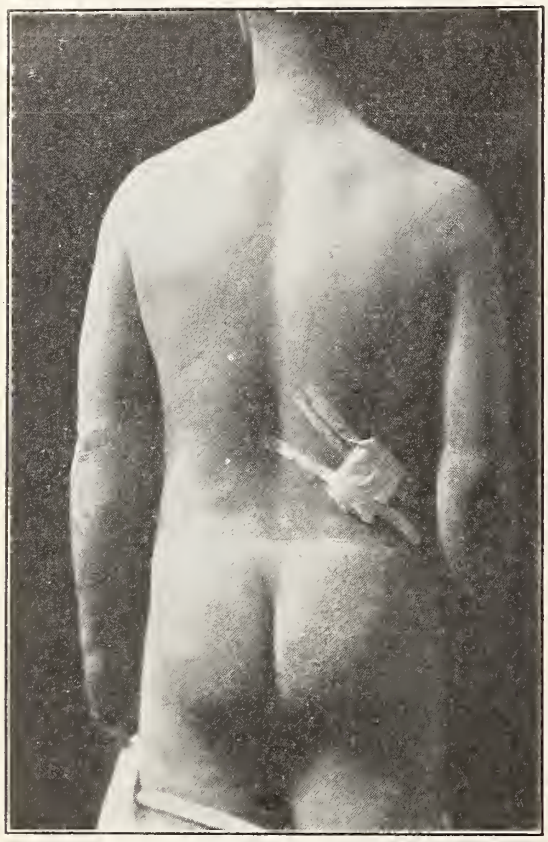

Fig. 4.

Fig. 5.

CASE REPORT

The patient, age 40, a Jew, a salesman by occupation, appeared in our office for the first time February 11, complaining of an eruption occurring on the buttocks, back, knees, elbows and dorsum of the neck, with some discomfort caused by a pricking sensation.

F. H.—Mother had diabetes mellitus and died of complications, Dec. 3, 1922. The patient related a bit of history that brought to our minds the question of a familial tendency. He makes note of the fact that his mother had a similar eruption occourring in the areas of predelection for the Xanthoma Diabeticorum. He claims that the lesions had the characteristic capping like his own, were as hard and was particularly troublesome from the pricking and itching produced. The lesions were unrecognized by the attending physician as such, but if our patient's observation is reliable and we have no reason to doubt it is, we certainly are fortunate in having two such conditions occurring in the same family. One sister has diabetes but thus far has shown no cutaneous lesions.

P. H.—He had the usual childhood diseases. Neisser infection at the age of 18 and a reinfection at the age of 32. A chancroidal infection in 1898.

M. H.—Was never married.

P. I.—He dates his present illness back to 6 years ago when he was forced to seek advice of his physician, Dr. Varney, for a skin eruption as at the present time and discovered that he had Diabetes. He does not recall of having had Polydipsia. Under treatment the cutaneous manifestation disappeared and for 6 years no trace of a skin eruption could be found. During this period he was under no doctor's care and did not adhere to a strict diet. He had had no urine analysis during these 6 years.

Six weeks ago the eruption reappeared. At that time the patient had the subjective symptoms of increased thirst, polyuria and an associated neuritis of both feet. He entered the office on February 11.

P. E.—The patient was well nourished florid individual weighing 180 lbs.

The eyes reacted to light and accomodation. The retina showed no changes.

The tonsils were large and septic.

The second right lower molar showed periapical pathology.

The rest of the examination was negative.

DERMATOLOGY (Fig. 1)

Over the extensor surface of the arms, the elbows, dorsum of the neck, right flank, buttocks and knees could be seen many papules and nodules which showed a distinct tendency to arrange themselves either in lines or groups. The lesions are monomorphous, firm, conical and consisting of a reddish base. They are capped for the most part by a yellow or yellowish white apex, or by a fine dirty scale. Some of the papules are pierced by a hair which, however, soon breaks off at the apex of the lesions, leaving a dark pin point in a field of light yellow or white, and giving the lesions the appearance of having little rings on their apices. The lesions are for the most part discrete with only a few showing some tendency to confluency. Over the buttocks the lesions number about 250. They are neither painful or tender to touch. They do not appear to be affected by trauma. The patient complains, however, of feeling as if sitting on a bean bag or on gravel.

LABORATORY FINDINGS

The urine was strongly positive for sugar (Benedicts and Fehlings).

Blood Wasserman Negative.

Blood sugar, .2.

A blood Cholesterin was done and was found to be 352 Mg. per 100 C.C.

A blood fat was done and was 1 Mg. per 100 C.C.

R. B. C. 4,000,000.

W. B. C. 9,000.

Hemaglobin 90.

The pathological process producing this, has been brought to light within recent years by Pollitzer and Wile in their work on Xanthoma. Xanthoma is characterized by an increase in the blood cholesterin appearing in the form of cholesterol fatty acid esters. This increase in the lipoid substance of the blood in these conditions is accompanied by a passing through of these chloesteral esters through the capillaries at points of diminished resistance and therefore appearing in the lesions. For a more complete report of the authors refer to the original article written by Pollitzer and Wile.

HISTOPATHOLOGY

Several papules and nodules were removed for Biopsy under local anesthesia and a study was made.

The epidermis was intact. There is a complete loss of the Rete Pegs over the lesions, but they appear to be increased in length along the periphery. In the upper part of the Corium groups of atypical cells, looking like atypical endothelioid cells and resembling very much the cells of the lymph amgioma hypertrophicum are seen. Groups of these cells show the characteristic lipoid change of a Xanthoma. Many of the cells are multi nuclear and they show a tendency to form whorls replacing the collagenous tissue and appear Neoplastic in type. The Xanthoma cell character is seen only in the central part of the larger cell areas. The lymph and blood vessels are dilated and throughout the lesion there is a variable degree of cellular infiltration consisting of round cells and polynuclear leucocytes. (Fig. 11) Many of the connective tissue cells appear swollen.

TREATMENT

The patient was placed on the Newburgh-Marsh high Fat Diet. (4) approximately 1652 Calories P. 34. F. 176 C. 26, this was gradually increased and the excess suplanted by (Ely Lilly's U) Insulin 10 units daily. The patient has been kept sugar free with the following results.

The lesions began to flatten out and became more pink; some of the lesions showed a similar involution as that reported by Engman and Weiss (5) in that there was a tendency for the surface and center of the lesions to shrivel, leaving a ring of Xanthoma.

After four days of treatment with Insulin it was discontinued and the patient was capable of maintaining a fair diet and at all times being sugar free (no Glycosuria) 10 days after the patient's first appearance in our office the lesions had almost completely involuted. The lesions on the back of the neck were the first ones to disappear.

SUMMARY

We do not believe that Xanthoma Diabeticorum is on the increase, but rather that we are more capable of recognizing the lesions as those associated with diabetes. Although there are only about 70 cases on record, we feel that there are numerous cases that have not been reported.

The question of familial tendency has not received much attention in the past. In our particular case with both mother and son affected by a similar eruption, would indicate that such a thing is possible. The son, therefore, not only inherited the diabetes that is so characteristic of his race, but also the tendency for a diabetic xanthoma.

With insulin we have found a way in which we can speed up the involution of the lesions. It was amazing to see how four days of treatment with insulin, plus a carefully balanced diet, in which the blood sugar was restored to normal, had caused such a marked involution of the eruption.

Just what part insulin plays in reducing the cholesterin in the blood cannot be definitely stated. We cannot venture at this time to explain some of the modern conceptions or theories on the subject until the blood chemistry is more thoroughly investigated.

We did not deem it wise ot continue our insulin injections as long as we were capable of keeping our patient free on a fair diet.

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DROPPER SUCTION TREATMENT OF DISCHARGING EARS

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Otologists are almost unanimous in the opinion that a wide incision of the ear drum is indicated in acute purulent otitis media. Nevertheless the question of treatment immediately following the myringotomy is the subject of a wide divergence of opinion. There are the followers of the douche and irrigations, there are others that feel that gauze drains are to be used, still others whose treatment consists of ear drops, and many that employ methods which are combinations or modifications of these plans. Even in the camp of the "irregators" there is a divergence of opinion as to how many irrigations are needed and how they are to be employed and also what solutions are the most desirable for this purpose. I believe that recent thought among otologists is to get away from the time-worn douching treatment of the ear, for the reasons that instead of accomplishing its purposes it tends to a further spread of the disease, adds secondary infection from the outside and causes a desquamation in the canal that interferes with both drainage and vision. The objections to wick treatment have been that it has a tendency to block up the secretions, causes a local reaction in the canal, and necessitates the constant vigilance of the attending physician.

In considering the use of ear drops in post-myringotomy treatment, I have observevd that the forms and compositions of the drops are legion which at once indicate the lack of any specificity of each in its therapeutic role. Nearly all of the newer and the older antiseptics have been incorporated in the use of ear drops. Of the former those appearing mostly in literature are mecurochrome and acriflavine, and of the latter, bichloride of mercury and the iodides may be mentioned. Astringents are usually incorporated in ear drops and of this class may be mentioned alcohol in its various strengths and the weak formalin solutions. That ear drops per se do frequently possess marked therapeutic value in many cases, cannot be denied and this is also true of the other forms of treatment as outlined above.

There has appeared recently in the literature the use of suction apparatus following the myringotomy operation. The purpose of this treatment being threefold: Firstly, to aid drainage, secondly to keep the wound open, and thirdly, to prevent complications. In the hands of the advocates of this method, the results are most gratifying.

E. R. Carpenter (1) goes so far as to say that with the use of the suction method 90 per cent of mastoid involvments and chronic suppurations can be avoided. He employs from five to fifteen pounds of pressure as soon as possible after the drum incision. Callison (2) advocates, short vacuums frequently repeated, using a low vacuum pressure. He claims that he has found no method to equal the suction in removing the viscid mucous secretions from the middle ear. A point brought out in the advocacy of the suction treatment is that as the edges of the incision are better kept apart, reincisions are less frequent. Though I am a firm believer in the principles of this treatment, I feel that there are some objections to its general adoption. In the first place, the patient must be brought to the office or hospitalized in order that this treatment may be given, and if this is indicated more than once daily, it proves impractical in its application. Furthermore, a great percentage of acute ears are operated in the homes and the otologist cannot conveniently carry along in his armamentarium a portable suction apparatus of the proper kind and with the proper accessories. Another objection is that it is more or less painful and psychically upsets the patient, making the management of the case more difficult.

Overcoming many of the objections in the various methods of treatment, including the suction, I have on the other hand incorporated their salient objectives in the following routine treatment which I have adopted in the management of all cases following myringotomy. Immediately following the incision, the canal is irrigated with some warm Wright's solution, which consists of 1 per cent citrate of soda in a 4 per cent saline solution. The action of this solution, as explained by Leland (3) is, first, to prevent blood coagulation, and secondly, by its osmotic action, to favor drainage. Following the irrigation, a sterile gauze wick is introduced into the canal, saturated with the solution. If the operation is done in the afternoon the gauze wick remains until the next morning, or if done in the morning, until the same evening, when it is removed. If, upon removing the gauze the canal and middle ear are found filled with purulent secretion, the dropper suction treatment is then employed.

This consists, first, of instilling into the ear canal with a large size medicine dropper a warm antiseptic solution. Any of the various antiseptics may be used. I am using for this purpose equal parts of pure alcohol and a solution of 1:500 neutral acriflavine. After a few minutes the fluid is withdrawn by the suction action of the dropper by

pressure on the bulb in the usual manner. The withdrawn fluid is then expelled, the dropper cleaned in sterile water and the drops again instilled. The suction and instillation is repeated until all particles of pus and mucous are removed and this can be easily determined by looking at the contents of the medicine dropper and noting whether it contains pus particles or not. When the middle ear is thoroughly drained by the dropper suction treatment, a few drops of the solution are once more instilled, the canal closed with cotton and this remains until the next treatment, which is advised from three to four hours later.

My personal experience with this routine has been indeed gratifying. Most of the ears show a healed drum and a subsidence of the symptoms by the third day. However, I do not claim this to be a panacea for all middle ear infections. I have not lost sight of the necessity and the importance of treating the patient constitutionally as indicated by his general status. As nasopharyngeal structures are usually the primary site of the focus of infection to the middle ear, attention must be directed to these areas and the appropriate medication and treatment instituted. It has been my policy to advise the immediate removal of the adenoids in infants when a wide incision of the drum and the consequent medical treatment brings no subsidence of the symptoms and pathology. The remarkable change for the better that follows an adenectomy in these cases merits its more cordial adoption by the profession in its efforts to combat the complications of otitic infections such as mastoiditis, sinus thrombosis, brain abscess, etc.

In conclusion I may add that I do not claim any priority in the use of the dropper suction method of treatment for I understand that it has been adopted in some of the institutions in the east. I think that this method merits the earnest consideration of the profession in the treatment of post-myringotomy cases. It is simple and can be readily carried out by the mother, nurse or physician. Not only is the treatment indicated following operative treatment of the middle ear, but in any cases of discharging ears where there is no involvment of the deeper structure.

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BISMUTH IN THE TREATMENT OF SYPHILIS

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In response to numerous requests from various members of the staff for more information in regard to bismuth therapy in syphilis, I have decided to present this brief review of the literature and my experience with this drug.

Bismuth has long been known to possess bactericidal properties. Odin in 1786 used it in gastric affections. Bismuth has been used for its local effect as a dusting powder. In 1889 (1) Balzer did a considerable amount of experimental work on the toxicity of Bismuth and decided that it was too toxic for use. Sazerac and Levaditi, in 1920, (2) investigated the use of sodium and potassium tartro-bismuthate on various syphilitic lesions and found this drug beneficial. Fournier (3) and Guenot verified their results clinically and announced in 1921 that bismuth had a decided curative action in syphilis.

In studying the problem of a syphilis therapy we must determine these factors: (1) the effect on the spirochete in different stages. (2) on the blood and spinal fluid reactions. (3) on the symptoms of the disease present at the time. (4) on the presence of further syphilis symptoms. (5) the harmful effects. We will try to follow out the action of bismuth in reference to these points. The most important new salts of bismuth are the hydroxides, iodoquinates, the sodium and potassium tartrate and the salicylates. The average dose is from 6 to 15 cgms, and these salts are put up in an oily suspension given in intramuscular injection on the average of every two or three days. The amount given in one course is about 2 gms., followed by a rest period of from one to two weeks, and then a continuation of the treatment.

Bismuth exerts a direct action on the spirochete and is more bacteriocidal than mercury. (4) Various writers state that 24 hours after the injection of bismuth the spirochete cannot be found in the primary sore and the sores completely heal after four or five injections in eight to fifteen days. In secondary syphilis the mucous patches disappear rapidly. As to skin eruptions, some disappear rapidly and some not so rapidly. Bismuth is much safer in nephritis, the Wasserman is negatived in about 30 days. Tertiary syphilis shows the healing of gummata and ulcerations rapidly, 15 to 20 days. Tabes dorsalis responds rapidly, lightening pains disappear and crises improve. Spinal fluid rapidly becomes normal and the spinal system does not seem to be involved as much as with salvarsan. Visceral

syphilis, aoritis, osteitis and eye infections show marked improvement under this method.

Bismuth is absorbed rapidly from the muscles. It can be demonstrated in the saliva within 24 hours, in the urine within 18 hours, in the cerebro-spinal fluid within 96 hours. The effect seems to be quite lasting and elimination becomes slow with increase in treatment, bismuth being found in the urine as late as 28 days after the last dose.

The untoward results of bismuth therapy are salivation, stomatitis, ulceration of the throat, diarrhoe, albuminuria and death, but at the present time there has been no evidence of fatality with bismuth. Fowler's solution and due attention to prophylaxis has been sufficient to overcome the stomatitis. The symptoms of cumulative action of bismuth is headache, malaise, weakness, together with albuminuria and jaundice. These symptoms are treated with iron and arsenic. There has been no Herxheimer reaction noted.

A perusal of the foreign literature shows great enthusiasm for bismuth as an adjunct in the treatment of syphilis and the system followed in some of the European clinics is as follows: An intensive attack with salvarsan, or neosalvarsan, using from 8 to 12 injections; a rest period of one week; bismuth .6 gm. doses 10 to 15 injections intramuscularly, then mercury, soluble, or insoluble, also intramuscularly. An interesting report from the clinic of Dr. Mucha, Heilanstalt in Vienna is as follows:

"In 36 cases of treatment of lues no cases of Herxheimer eractions, only two cases of stomatitis, which were easily relieved without interruption of treatment; no cases of albuminuria by either chemical or microscopic examination; no enteritis; 1 case of icterus, which disappeared on continuation of treatment. In regard to weight, 5 patients held their weight, 3 lost considerably and the balance gained in weight. In regard to results on visible symptoms, we had one case of secondary and one case of genital papules. Both disappeared after the third injection and were Wasserman negative at the end of the first course of treatment. We had 7 cases of sclerosis, which we treated with a combined neosalvarsan and bismuth. The lesions disappeared on the average of 6 to 8 days and were Wasserman negative at the end of the course of treatment. In regard to the change in the Wasserman reaction in latent cases, the average of 12 grams of bismuth was found to cause a reversal of the Wasserman reaction.

University Skin Clinic in Bonn:—An interesting observation, made at this clinic, is the point that although bismuth is found in the spinal fluid, they raise the question whether the concentration is sufficient to act as a spirocheticide, and they also state that the number of cases was not sufficient in order to be able to arrive at a proper conclusion. However, their results are very similar to those previously reported. They also report a case where spirochetes were found in a sclerosis; no spirochetes being found two days after treatment; after 10 days spirochetes were again found and after this they disappeared permanently. Their conclusion here is that bismuth certainly lessens the infectivity of the lesions. The slower disappearance of the spirochete possibly accounts for the absence of the Herxheimer reaction and the spirochetic fever. In the cases of primary roseola, plaques, papules, alopecia and adenitis, it takes longer for these to disappear with bismuth than with salvarsan; 3 to 5 days with salvarsan and 6 to 16 with bismuth. Cases of papular efflorescences on the extremities which were resistant to mercury and salvarsan, yielded, but also slowly. There seems to be a beneficial action on the specific alopecia as they report regeneration of the hair and eyebrows after 10 to 20 days. In 13 cases of secondary syphilis the Wasserman reaction was negative in 4 cases; weak in 5 cases and positive in 4 cases. There is little pain from the injection; no liver symptoms; no kidney symptoms. Although bismuth is behind salvarsan in speed of results, it is that much ahead of mercury. It works better than mercury and can take the place of it in combination with salvarsan.

From the clinic of Herxheimer, University of Frankfort, comes this report:

"The fact that the treatment of syphilis with mercury and salvarsan leaves much to be desired has caused research workers to look further for a method of treatment and the discovery of bismuth. For the past two years this treatment has been tried on the continent. The experiments of Sazerac and Luvaditi show that by experimental syphilis, as with human syphilis, bismuth shows a strong treponemocidal action. Fournier, Guenot, Lacopere, Pomoret and many others tried various combinations of bismuth and advised of is possibilities. In two years the literature has grown to such an extent that to attempt a report on the literature is rather impossible. However, most of the authorities were agreed on the same thing; that in bismuth a new syphilitic agent had been found that stood below salvarsan and above mercury as a spirochetal agent. They found that the spirochete disappeared rapidly from primary lesions; that secondary lesions disappeared in from 3 to 6 days; that tertiary lesions were decidedly benefited and that Wasserman-fast reactions were made negative. Harmful results such as stomatitis, gastro-enteritis, nephritis, vomiting, diarrhea were found by the intravenous injections of a collodial bismuth, but were infrequent with the intravenous injections of a colloidal bismuth, but were infrequent with the intramuscular. They found that the spirochete was less active after 4 hours and disappeared with about the same rapidity as under Salvarsan therapy. Maculo-papules and pustules disappeared in 10 to 14 days."

I have for some time been experimenting with the use of bismuth in the various forms of syphilis and a resume of the treatment is hereby appended: Altogether I have used bismuth in 29 cases with the following results:

Primary lesion—chancre, 2 cases. Treatment given; neosalvarsan, 7 injections, bismuth salicylate 14 injections. At the time of the be-

ginning of treatment one case was Wasserman positive, the other Wasserman negative. At the end of the treatment both were Wasserman negative. The lesions disappeared on the average of eight days.

Secondary—2 cases—Wasserman on both at beginning of treatment XXXX . Treatment given; neosalvarsan 2 injections, bismuth salicylate 14 injections. At end of this time case No. 1 had a negative Wasserman, case No. 2 a XXX Wasserman. Skin and throat lesions disappeared inside of one week.

Active tertiary—4 cases.

Wasserman on all of these cases, XXXX.

Case No. 1 received 7 injections of neosalvarsan and 8 injections of bismuth salicylate. Wasserman at the end of this time XXXX. The lesions had disappeared at the end of 10 days.

Case No. 2, a fat woman, was given bismuth salicylate only. After 8 injections XXX Wasserman; after 14 injections X Wasserman. Lesions disappeared in 16 days.

Case No. 3—Three injections neosalvarsan; 16 injections bismuth salicylate. Wasserman negative. Lesions disappeared in 4 days.

Case No. 4—Four injections neosalvarsan; 20 injections bismuth salicylate. Wasserman negative. Throat lesions disappeared in 8 days.

Of these four cases Nos. 1 and 2 had had previously 12 injections of neosalvarsan and from 20 to 30 injections of mercury. Cases Nos. 3 and 4 had had no treatment previously.

Latent—19 cases.

These were patients that I had under treatment and on rest periods at the time. These were all put on bismuth, receiving from 8 to 24 injections. Six cases returned a negative Wasserman at the end of the course of treatment; 4 cases changed from XXXX to X and XX and 9 cases were still XXXX at the end of the treatment.

Gummatous—1 case.

This was a gumma of the right leg with a XXXX Wasserman. The patient had received at one time or another 15 injections of neosalvarsan and about 40 of mercury. This patient received one injection of neosalvarsan and 16 injections of bismuth salicylate. The gumma disappeared after four weeks, but the Wasserman was still XXXX.

We have at the present time a number of cases under treatment with bismuth only in the clinic and the results seem to indicate that it works better in combination with salvarsan than when used alone, but I will be glad to report later when the series is completed.

Summing up this rather limited experience with bismuth salicylate, I find myself heartily in accord with other writers, who state that in bismuth we have an adjunct in the treatment of syphilis that stands far above mercury, but below salvarsan in efficiency. Some of the more important points which may be summarized are:

It is practically painless.

It is better tolerated than mercury.

Produces no Herxheimer reactions.

Can be used in patients with nephritis.

Its slower action helps protect the patient against the early development of neurosyphilis.

It is very efficient in cases that are Wasserman-fast to salvarsan and mercury. All in all, it is my opinion that it is well worth using as an adjunct in the treatment of this most protean of diseases.

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THROMBO-ANGIITIS OBLITERANS

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Thrombo-angiitis is a disease characterized by occlusion of the blood vessels of the extremities. That such a disease existed has been noted for many years; and such writers as Friedlander, Von Winiwarter and others have written extensively upon this subject many years ago; however, a study of the literature reveals a certain degree of confusion existing in the classification of the various conditions characterized by vascular occlusion as for example Raynaud's disease, endarteritis obliterans, syphilitic endarteritis, arteriosclerosis and erythromelagia. It remained for Leo Buerger (1), (2), (3), (4), of New York City, to properly classify this particular disease, describe its symptomatology and pathology as a distinct clinical entity and even to give it its name.

The etiology of the disease is not definitely known, but various factors considered of importance are stasis, dependency of limbs, trauma, activity of the circulation, tobacco and

thermal influences as exposure to cold; infection of some sort has been considered and microscopically there is some justification for considering this an infective process, but there has never been an infective agent found. Careful search has been made for pus producing organisms, bubercle bacilli, also spirochetae, but without success. Leukocytosis has been found in early cases of this disease by Thomas (5). Tobacco is apparently a predisposing cause and Erb and Willy Meyer (6) have thought that tobacco could give rise to vascular changes. Foods have been considered as a factor in the production of the disease, but as the disease is never seen in women, foods could be ruled out. Rye bread has been considered by some observers as being an etiological factor on account of its relationship to ergot poisoning. However, rye bread is eaten extensively in other countries, notably Germany, where the disease is rare. That it may be an endocrine disturbance has also been considered, but no definite justification for this etiology could be determined; however, some endocrines have been used in its treatment. Occupation seems to have no relation to the cause. Kogo and Mayesima, two Japanese clinicians, have considered altered viscosity of the blood as being a causative factor and treatment based upon this has been used with reported success by Willy Meyer and Dewit Stetten and others.

The condition is generally seen in males and starts generally between the ages of twenty and forty years. It is usually seen in Hebrews of Russian, Polish or Galician birth. Buerger has mentioned cases occurring in American born of parentage coming from the countries mentioned. I have been unable to find note of a higher incidence of the disease in individuals coming from any particular district in countries mentioned. Koyano (7) and Kumita (8) report having seen the condition in the Japanese and Ochsner reports having seen it is Swedes while Whyte has seen it in Chinese. All of the cases that I have seen have been in Hebrews.

PATHOLOGY—GROSS AND MICROSCOPIC

There are certain difficulties encountered in a study of the early pathology of this disease because the early changes in the arteries as a rule cannot be studied by the pathologist because the indication for amputation of an extremity does not exist, hence the laboratory does not receive the material until the arterial lesions are well advanced. Howevver, as the small and superficial veins are involved early in the disease and are readily accessible for study, the information needed has been obtained from the study of small sections of superficial veins. It has been found that early in the course of the disease a phlebitis occurs in many cases; it is often migrating in character and manifests itself by small tender masses along the veins in both the arms and legs and it may be the first evidence of diseased blood vessels. A microscopic study of a section of such an involved vein shows an infiltration of all of the coats of the vessel wall with leukocytes; there is a soft clot in the lumen of the vein. This clot is composed of red and white blood cells, also fibrin. Buerger has described giant cells, and on account of this, thinks that he is dealing with an infective process. The further course of the disease discloses organization of the clot so that fibrous tissue formation occurs in the clot and canalization of the clot as well. A definite canal will be formed in clot which lies within the lumen of the blood vessel. Gradually the infiltrating leukocytes in the media and adventitia disappear and the vessels appear to be a rather firm cord. The cut surface of vessel wall involved shows a rather firm clot present in the lumen of the blood vessel. If amputation be performed on blood vessels in this stage, practically no hemorrhage ensues as the blood vessels in this stage are well "plugged." As the condition advances, the artery, vein and nerve becomes quite firmly bound together in an adherent mass as there is considerable periarteritis. The intima is preserved entirely and there is no proliferation of the endothelial cells as has been described in obliterating endarderitis. Von Winiwarter and Friedlander attribute the closure to proliferation of the intima. Weiss and Von Manteuffel believe the occlusion due to localized arteriosclerosis in the popliteal vessels with desquamation of the endothelial cells, which is followed by white thrombus formation, which extends downwards to the smaller vessels. The blood vessels involved are those of the upper and lower extremities as the dorsalis pedis, planter, anterior and posterior tibials, radial and ulnars also popliteals. At times the dorsalis pedis may pursue an aberrant course; this is of importance in the diagnosis. Bernard made a series of studies of the blood chemistry in this disease, taking into consideration the blood sugar, blood nitrogen, cholestral and calcium. His observations did not disclose any great alteration from the normal (9).

SYMPTOMS

This is not a disease of abrupt onset; coming on gradually as it does, patients usually seek a doctor's advice for rheumatism, flat feet or neuritis because the symptoms complained of are in many respects similar to those noted in the disease mentioned. The usual early complaint is severe non-localizable, cramp-like pains in the calf muscles of one or both lower extremities. These pains are sudden in onset, coming on while the patient is walking, and is often so severe that the patient must stop and

rest for a short time. This has been called intermittent clandication. In addition, patients complain of coldness of one or both extremities, depending upon the degree of involvement. More or less severe and constant foot pain is a common complaint and the individual so afflicted is always having his attention drawn to his aching feet. Numbness is also often noted. There is as a rule no impairment of sensation.

The general appearance of the extremities varies with the stage and severity of the disease. In an early case there may be some slight degree of redness or cyanosis with coldness of the foot to the palpating hand and the pulsation of the dorsalis pedis may be lost. However, in a well advanced case, the foot—if that be the part involved—is definitely cold, colder than the other foot. The dorsalis pedis pulse cannot be felt. There may be indolent and painful ulcers upon the toes, ankle, dorsum or lateral aspects of the foot. There may be fissured ulcers between the toes, the skin over the toes may be shiny in appearance and atrophic, signs of infection with lymphangitis may be seen, also bullae and blebs. The nails appear poorly nourished, the derma is at times thickened and firm and small areas of scleroderma may be present, particularly over bony prominences. The affected part may be deeply red or cyanosed in the lowered position, due to compensatory dilatation of the superficial capillaries, called erythromelia by Buerger.

Certain phenomena of the impairment of circulation may be seen upon examination of the part in different positions because the vascular supply of the affected part is now passing through more or less rigid tubes instead of normal contracting and expanding blood vessels. If the patient is placed in the reclining position and the affected extremity is elevated at right angles to the body, very shortly the foot becomes blanched and pale because the blood is mechanically drained to maintain circulatory equilibrium regardless of the position of the foot. Upon depression of the foot in a lowered position, it will be noted in a varying period of time that foot becomes deeply red, or even cyanosed; this is due to the blood flowing downwards, with resulting compensatory dilatation of the superficial capillaries. The degree of ischemia of blanching is indicative of the amount of involvement of the vessels.

Buerger speaks of the angle of circulatory efficiency as being that point when the foot becomes red when the leg is lowered slowly from the vertical position. Another test which may be used is that of completely obstructing the circulation by a tourniquet about the thigh. This is suddenly released and where first the normal blush of the capillaries is noted, one is fairly sure of encountering good vessels. This is of importance in determining the proper site for operation.

DIFFERENTIAL DIAGNOSIS

This involves a consideration of arteriosclerotic gangrene, diabetic gangrene, Raynaud's disease, syphilic arteritis. The first two mentioned should cause no difficulty; however, the diagnosis between thrombo-angiitis and Raynaud's disease has caused some difficulty. The following may be of some service:

(1) In thrombo-angiitis the vessels are permanently closed; in Raynaud's disease the closure is temporary. The course of the disease is progressive in thrombo-angiitis and not in Raynaud's disease.

(2) Raynaud's disease is usually symmetric in its involvement and often involves the nose and ears. Thrombo-angiitis usually involves but one extremity.

(3) Exacerbations are generally rapid in onset and subsiding in Raynaud's.

(4) Migrating phlebitis is common in thrombo-angiitis.

(5) Changes occur in posture of limbs in thrombo-angiitis which do not occur in Raynaud's.

(6) Changes in Raynaud's disease generally follow sudden exposure to cold. This is not the case in thrombo-angiitis.

(7) Raynaud's disease occurs in men and women and thrombo-angiitis is only found in men.

(8) Raynaud's is found in the very young, while thrombo-angiitis occurs in those past 20 years.

TREATMENT

Having diagnosed the condition in its early stage, the importance of care in avoiding trauma to the affected part is quite evident because a bruise or the cutting of a corn or callous may be the onset of an ulcer which might never heal. Various methods of treatment have been used for the relief of pain, and to attempt to correct the changes which have taken place in the blood vessels. The methods used are rather numerous and consist of the following:

(1) Drugs as aspirin, codein, benzol-benzoate, etc. Also nitrites for local effect upon the blood vessels.

(2) The introduction of fluids such as Ringer's Solution, glucose solution and sodium citrate. These are given with the view of altering the viscosity of the blood. Willy Meyer and other observers have claimed considerable benefit from this method of treatment. The glucose solution is given by Murphy drip, while Ringer's Solution and sodium citrate are given intravenously. A 2 per cent citrate solution is used. Dr. Buerger recommends the injection intravenously of potassium iodide.

(3) Postural treatment with attempts of re-education of the blood vessels, elevating the part for one or two minutes and holding it horizontal, and then depressing it. This is done several times daily. In addition to this the part may be placed alternately in hot and cold water.

(4) Various endocrines, as thyroid and pituitary, have been used.

(5) Gottesman (10) has mentioned recently the intramuscular injection of stock typhoid vaccine given in dosage from .25 to .5 cc. weekly, and has claimed that considerable relief from pain will follow. Sufficient of the vaccine is given to bring about a reaction with fever malaise and bone pain.

(6) Heat by diathermy.

(7) Numerous methods of surgical treatment have been used and these consist of the following: Ligation of the femural vein, arterio-venous anastomosis and division or alcoholic injection of the nerves in the adjacent parts. Periarterial sympathectomy, as first devised by R. Leriche (11), possibly may be of great benefit in the disease. The operation has been used by Halstead and Christopher (12) with reported success in vascular disease. Recently Dr. J. Walter Vaughn of Detroit performed the operation for arteriosclerosic gangrene with almost immediate relief from pain, coldness and numbness in the affected extremity. The operation consists briefly in dissecting out a small portion of the femural artery, incising the adventia down to the media and stripping this coat for a short distance. The articles of Leriche and Halstead describe the operation in great detail. However, if all of the palliative methods do not give relief, then amputation must be performed high above the afflicted part where normal blood vessels will be found, otherwise healing will not occur.

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TRIP TO NEW ZEALAND AND AUSTRALIA

RICHARD R. SMITH, M. D., F. A. C. S.
GRAND RAPIDS, MICHIGAN

We sailed from Vancouver on February 8th of the present year. In the party were Dr. and Mrs. Wm. J. Mayo, Mr. and Mrs. John C. Kahler of Rochester, Minnesota, old time friends of Dr. Mayo, Dr. and Mrs. Franklin H. Martin of Chicago, Dr. Richard Harte of Philadelphia, my wife and myself. In the party, but accompanying it only as far as New Zealand, were Dr. Francis P. Emerson of Boston and Dr. Thomas Hubbard of Toledo, Ohio, who read papers befor the Oto-Laryngological section at the Auckland meeting. We went for a good time, to meet the medical men in the countries visited, and to learn something of their medical schools, hospitals, and the condition of medical practice there. On the way coming and going we stopped a day each at Honolulu and at Suva in the Fiji Islands. We were royally received and entertained wherever we went and every opportunity was given to us to see the things in which we were interested. What we saw and learned would fill a book. In this brief article I shall only attempt to "hit the big spots" of medical interest.

HONOLULU

In Honolulu, one of the most wonderful garden spots of the world and of which we may be justly proud, we found that practice was being conducted by an unusually energetic, fine lot of medical men including a considerable number of Japanese doctors, since the population in the Hawaiian Islands is nearly half Japanese,* They have just moved into their new (Queen's) hospital of several hundred beds, beautifully constructed and equipped with every facility for hospital practice. It was up to the minute in every respect. In the Hawaiian Islands malaria is unknown, there is practically no typhoid, and but little of other diseases that are usually in evidence in semi-tropical or tropical countries. They are well advanced in child welfare work. We saw no operating during our brief visits, but judging from the men we met and what we heard it is undoubtedly of high grade. In Suva, the largest city and capitol of the Fiji Islands, we found a new hospital (Colonial), tropical in design, finely built, well equipped, caring for a large number of the native population in its in-and out-patient departments. It is the center of a small medical school which graduates Fijiian doctors and nurses, who after graduation go out to care for the dark inhabitants of those exceedingly fertile islands. There is practically no syphilis among the Fijiians and the reason given is that practically all of them have yaws (frambesia), a spirochete disease resembling syphilis somewhat, but much milder and apparently conferring immunity to the latter. There have been no instances in which the two have been found simultan-

*I would refer those interested to the February Geographic for a most entertaining account of the Islands.

eously in the same patient. There is much food for thought in these facts.

NEW ZEALAND

We landed at Auckland, New Zealand, just at the beginning of the annual meeting of the New Zealand branch of the British Medical Association. The people of New Zealand are almost entirely British. The Maoris, the original inhabitants, a dark race of unusually fine character, form only a small portion of the population. Nearly all of the medical men have graduated at their only medical school at Dunedin, a school of high standing, or in England, and, therefore, rank high in intelligence and education. They are highly respected and health matters of all kinds are intelligently discussed in the daily papers. They put on a program at the conference which lasted several days, which would do credit to a meeting of the A. M. A. Their methods of presentation, however, were below our standards. Papers and discussions are often very long, the halls poorly lighted, and their acoustic properties poor, but lantern slides and charts were much in evidence.

Dr. Herkus, of Dunedin, presented a most interesting paper on "Goitre in New Zealand," reflecting a stupendous amount of scientific work which demonstrated the lack of iodine in the soil in those areas where goitre was present. A splendid piece of research and well presented. The hospitals in New Zealand, many of them of antiquated structure, are being gradually replaced by fine modern buildings. They are behind us in building program, but their laboratories were exceptionally good and extensively used. We saw some fine x-ray outfits and many interesting plates. The general mortality rate in New Zealand is the lowest in the world. Their mortality in childbirth is also the lowest. There are practically no irregular practitioners in New Zealand and practice otherwise is conducted much as in this country. In both New Zealand and Australia we found the hospital arrangements much like that in England though the bad features were not as marked. There are in the first place General Hospitals at all important points. These hospitals are run by the municipalities or subsidized by them. Anyone may enter and be treated, paying the moderate hospital rate, or none, according to pocketbook. No physician is allowed to charge for any patient treated in these hospitals. It is evident that a large percentage of patients treated might well pay something for the service. They have also a large number of private hospitals managed by individual doctors or small groups where patients pay well and where medical and surgical service is, of course, charged for. In building and ordinary equipment these hospitals are often excellent, but in scientific equipment and the facilities and organization necessary for doing the best kind of medical and surgical work, they are far be-

Meeting of the New Zealand branch of the British Medical Association at Auckland on March 1st to 6th, 1924

hind the general hospitals. It, therefore, happens that people with means sufficient to pay for good service receive an inferior brand. They were interested over there in hearing of our community hospitals in which people of every station in life were treated alike. They were also very much interested in our hospital standardization program and I believe we implanted some ideas in regard to it which will eventually take root. We visited the four largest cities in New Zealand in addition to touring the country and came away tremendously impressed with the medical men and surgeons and the quality of the service they are rendering the public. Their standard of ethics is exceedingly high. The medical fraternity in New Zealand live well and are evidently prosperous as such things go. They have only about half as many doctors according to population (a million and a third) as we have in the United States.

AUSTRALIA

We were sixteen days in Australia, visiting only Melbourne and Sydney, with a little of the surrounding country, but none of the interior of this great commonwealth. Australia is as large as the United States and has a population of only five and a half millions. They also are of nearly pure British stock. Sydney has a million people and Melbourne eight hundred thousand. We found, therefore, larger hospitals. We visited many of them and the two largest medical schools. Here also the profession is of high order. The medical schools are few and of superior grade. There is much new hospital building everywhere. The profession is much interested in its many problems of practice as in this country.

The Australians are very much like the Americans in energy, intelligence, and viewpoint. They are contributing much of value to the world's medical literature. We saw here some of the finest medical and surgical work that we have seen anywhere in the world. (There is also a considerable amount of research work going on. The work of Dr. Colin Mackenzie of Melbourne, a comparative anatomist of the first water, is especially worthy of note. It seems that Australia is peculiar in having a number of animals of the lowest mammalian type. They are extinct elsewhere and almost so here. An intensive study is being made of these animals and their habits and careful dissections are being made by Dr. Mackenzie, bringing to light many facts of prime importance in the physiology and anatomy of the mammal. He believes that the results of these investigations will undoubtedly influence to a marked extent our conceptions of pathology and the application of therapeutic measures.

The work of Prof. John Hunter and Dr. N. D. Royle is one of the most important among recent contributions. They have discovered that muscle tone is a production of the sympathetic nervous system and that many

Alfred Hospital
SYDNEY, AUSTRALIA

forms of spastic paralysis are but an evidence of an increase in this tone. They have been operating upon a considerable number of patients by severing the supply of sympathetic fibres to spastic muscles and have been achieving some very remarkable results. Dr. Royle will present the results of their investigations at the coming meeting of the American Clinical Congress in Boston in October.

We returned home early in May, extremely enthusiastic over the countries we visited and feeling that we had made many friends for America.

COUNTY SECRETARIES' CONFERENCES

BURDICK HOTEL, KALAMAZOO, MICHIGAN

April 16, 1924, 2 P. M.

We are very eager that the papers and discussions presented at the County Secretaries' Conference shall be available not only to those who were in attendance, but also to those County Secretaries who were absent and to our membership at large. There is much food for thought in this report. The line of activity and the work that each individual must perform is likewise apparent. It is the desire of the Council and your officers that each secretary and member familiarize himself with these problems.—Editor's Note.

DR. JACKSON: We will come to order and get started with our program for the afternoon The Chairman of the Committee of the Council on County Society Organization, Dr. Clancy, is unable to be here on account of sickness in his immediate family. He is very much interested in this Conference that we have on today and I know that he is very sorry indeed not to be here. In his absence as Chairman of the Council I will introduce the Speaker.

I might say just a word in the beginning about the problem of County Secretaries' Organization and County Secretaries' work. Some of you are very much more familiar with it than I. There was a time in our State Society work when we had an Association of County Secretaries. Dr. Kinsey here was one of the prime movers in that organization but we found it difficult to get County Secretaries together. At the time of the State Society meeting, the State Society meeting lasted over two days, County Secretaries did not like to give up an additional day. For the last few years we have tried to have a dinner during one of the days of the State Society meeting at which we tried to get in County Secretaries. Sometimes we would succeed in getting a half a dozen and more often we did not. The thing never seemed to go over very strong, everybody was busy about other things and our Secretaries Conferences did not amount to very much, so that this year we thought we would try the plan of a Spring conference, and that is why we are here today. Now, we have not arranged a very long program or very elaborate program because we wanted to make a very important part of this conference today the Round-Table Discussion of your individual problems.

You all of you have your troubles I have no doubt. Dr. Hoebeke, our local county secretary I know has, and I think some of the rest of you probably have a great many problems. It seems to me that this is a good place to bring them up and air them and talk over methods and ways and means, because as a matter of fact the success of the State Medical Society of Michigan depends upon the work that you men do; you are the fellows that are going to put it over if it is going to be put over. If Medical Organization in the State of Michigan is going to amount to anything, we have got to depend on you men for it.

The first speaker on the program this afternoon is Dr. Hoebeke of the Kalamazoo Academy of Medicine, on "Membership and Attendance."

MEMBERSHIP AND ATTENDANCE OF THE COUNTY SOCIETY

W. G. HOEBEKE, M. D.
KALAMAZOO, MICHIGAN

I have been asked to speak on Membership and Attendance of the County Society paying particular attention to the problems connected therewith. This does not, I take it, necessarily include anything concerning the solution of these problems, for which I am thankful. That, I trust, will prove an interesting subject for Round Table discussion. However, inasmuch as problems and attempts at solution are closely connected, I trust I may be pardoned mention here and there throughout this paper of attempts on the part of our own Society towards solving our own membership and attendance problems.

The questions arising from County Society membership and attendance at County Society meetings are not new, so that what I may have to say is already old news to all of you. But, inasmuch as these problems still exist it can do no harm to reiterate them trusting that thereby renewed efforts at their solution may be initiated.

Every County Medical Society has its own membership and attendance problems. It goes without saying that the problems of one county are not identical in all features with those of another. For instance, the Academy which draws its membership largely from the city has a different situation to confront than the Academy whose membership is largely rural. But on the whole, I believe, the differences are only in detail.

Of all the problems with which the County Society is concerned those of membership and attendance easily take the forefront. This, I believe, may be conceded. The very life itself of the Society depends on these two factors and not only that, but the State Society and the A. M. A. are dependent upon them also. Insofar as the county society is the unit of medical organization of which the A. M. A. is the whole, the condition of the county society as evidenced by its membership and attendance is an indicator of sorts of the well being of the A. M. A.

In considering first of all the problems of

membership, it is proper, I believe, to answer the question—why join a County Medical Society? The answer may be found stated for us in the "Principles of Medical Ethics," under the section entitled, "The Duty of the Medical Society," where we read, "In order that the dignity of the medical profession may be upheld, its standards exalted, its sphere of usefulness extended and the advancement of medical science promoted, a physician should associate himself with medical societies and contribute his time and means in order that these societies may represent the ideals of the profession." The reasons may seem idealistic in this day and age and the average physician may look for more practical reasons for joining his County Society. Reasons of this type are also to be found. They concern the individual physician largely and for that reason may be considered more or less selfish and yet I take it, a certain proportion of physicians who join their County Societies join for these reasons and these alone. There can be no doubt today but that membership in good standing in his local society is one of the best advertisements a physician has. The public, as a whole, is loath to trust a physician who is not associated, as a member of his medical society, with the best qualified physicians of his community. This may not have been true a few years ago, but it is increasingly true today. That the physician himself realizes this is evident in our experience at least from the fact that those physicians who are ineligible for one reason or another have approached us on more than one occasion and expressed a desire to join our local society.

Further, membership in a County Medical Society offers a physician the protection which such an organization possesses. This not only includes legal protection against malpractice suits—such as our State Society offers its members—but the moral support of his fellow members. A member does not need to feel as if he stood alone, but he knows that as long as he does not overstep the bounds of ethical practice he has his Society back of him.

Hence, I thing it may be said that while the County Society needs all the physicians of the county allied with it so that the ideals of the medical profession may be furthered, from a practical standpoint the individual physician needs much more than it needs him.

An editorial in the last edition of our State Journal entitled, "Society Affiliation," sums up admirably a number of reasons why every reputable physician should join his local County Society. No doubt you all have read it, but I believe in this connection it can well bear repetition. To quote our editor in part:

It is difficult to imagine how a physician can desire to remain outside of organized medicine. The advantages of membership are many and the expense is trifling. In some states, membership in the county, state and national organizations can be obtained for not more than $1.00 a month, and the disinterested observer would presume that every physician would be anxious to better his professional standing in a community by belonging to the proper organizations, even if for nothing else than for the protection of his professional standards. It should be regarded as good insurance with premiums at a very low cost.

Why should the individual physician belong to his county, state and national medical organizations? We present six answers to this question, each of which we believe, is sufficient to cause a man to make the investment which would enable him to become definitely identified with the very best there is in the medical profession:

1. To have a part in organized effort for the promotion of the science and art of medicine and the betterment of public health.
2. To take advantage of opportunities offered in the medical society for individual scientific improvement.
3. To receive the benefits of friendly social intercourse with other members of the medical profession.
4. To assist in and receive the benefits of organized efforts for the promotion of the material interests of physicians.
5. To be identified with, and recognized as one of, the most reputable, progressive and best qualified group of physicians.
6. To lend your influence for the maintenance of the highest human ideals.

As we have said so often through the columns of "Medical Economics," if the medical profession is to get anywhere we must do it ourselves. We cannot do it until the profession is thoroughly organized, that is, until the majority of physicians realize the necessity of uniting with the organized profession.

We are firmly of the belief that if doctors were to join the medical societies as they should, it would be possible for a united profession to demand of Congress that a Department of Health be added to the President's Cabinet with a physician at its head for the safeguarding of that most precious boon—health. A thoroughly organized profession could go far toward eliminating the cults and isms and 'paths and 'actors that now tend to destroy the faith of the laity in the best there is in medicine. As we conceive it, it is the duty of all physicians to join the county medical society forthwith and then to progress upward and become identified with the American Medical Association, which has done so much for the profession during the past twenty years.

If it be agreed that membership in the County Society is desirable and necessary for the best interests of the individual physician and the profession, the next logical question should be what shall constitute a basis of requirements for admission to membership? First of all I think it may be granted that simply a license to practice medicine in the state is not sufficient-essential as that requirement naturally is. The recent scandal in an eastern state where many incompetent and unprincipled quacks obtained licenses to practice medicine—

obtaining the necessary certificates admittedly without proper educational qualifications—is an instance where the medical practice act failed to prove the fitness of an individual to practice. Undoubtedly, some of these quacks obtained admission to their community on an equal basis with best men there. Of course such a possibility of ready licensure of quacks is decidedly less easy of accomplishment under our state laws, but the fact remains that they may gain admission to our communities through reciprocity or otherwise.

Furthermore, while license to practice medicine may determine a physician's educational qualifications it cannot determine his moral qualifications. An unprincipled physician is more detrimental to the profession than all the quacks and cultists can ever be. Men who for the sake of the almighty dollar make use of quackeries and humbugs in their practice or in any way deal unethically with their fellow-practitioners or the public should be excluded from membership in the County Society. The section of our medical ethics entitled "Safeguarding the Profession" sums up we have said, when it states, "Every physician should aid in safeguarding the profession against the admission to its ranks of those who are unfit or unqualified because deficient either in moral character or education." While this section does not refer directly to membership in a medical society it may nevertheless be so applied.

The difficulties, therefore, in admitting physicians to membership in the county medical society are obvious. It was formerly the custom and ruling of our Academy that a physician should be a resident in the county at least one year before he became eligible for membership. This ruling had much in its favor. It surely gave his fellow practitioners some opportunity to gauge his educational and moral qualifications. On the other hand, it deprived the physician of the moral support of the Academy at a time when he was most in need of it. Such a ruling would seem scarcely just to a physician of known ability and honor. However, in these days when membership drives everywhere are the vogue, it is best, while making every attempt to gather into our membership every eligible physician, at the same time to make haste slowly. No one should be admitted until his qualifications have been demonstrated.

The obtaining and choosing of new members cannot be left to the officers of the Society alone. There must be ready co-operation upon the part of the members. A membership committee composed of men from various parts of the county or counties is essential, but every member should be ready to assist in this work if every qualified physician is to be reached. An active Board of Censors should be the last word and should practically constitute an election or non-election. In order that this may be true it follows that this board must function efficiently. I believe that censorship should be emphasized. It is much easier to exclude an ineligible man from membership than it is to excommunicate him, so to speak, later, necessary as that may be. In this connection I should like to quote from an address made by Dr. Olin West, Secretary of the A. M. A.:

"It is undoubtedly true that individual members of the medical profession, some of whom are within the pale of medical organization, are guilty of reprehensible practices and that their transgressions bring reproach on the whole profession. Here is a job for medical organization to do, here is a reason for striving to perfect organization and for stimulating the zeal and efficiency of our component societies. In some spots our boards of censors and our councilors need to get busy. The membership of the American Medical Association, which is the combined membership of all of our state associations, was more than 90,000 on October 1. This peak will not be maintained, because many become indifferent or careless about maintaining membership and neglect to attend to the payment of dues until rather late in the year. We need some of those who are out, in; we also need to have some of those—a few—that are in, out. The men who will not live up to the ideals of organized medicine, the men who violate the principles to which organized medicine holds, the men who will not subscribe to nor support the ethics of the profession and who will not live up to its traditions are not those about whom the protecting arm of our organization should be thrown nor to whom our recognition as an organized profession should be extended.

While it is true, in our experience at least, that many physicians are ready and even anxious to join their medical society and to continue their membership year after year, because of this fact the society should not relax its efforts to obtain the membership of every eligible physician residing in the county. In the last edition of the State Journal there appeared a comparison in figures between the number of physicians residing in various states and the number who were members of the state societies. These figures for Michigan were as follows: Total number of physicians, 4,653; members of the State Society, 3,192, leaving a difference of 1,461 who are not members of a county or the State Society. If we had not seen similar figures before, such a comparison would have been surprising. Presumably, some of these physicians may not be in active practice and a certain few must be considered ineligible for one reason or another, but, even so, the fact remains that there are a large number who are eligible and still are not members. Furthermore, these physicians are residing in our county and in yours. I do not believe that in the

majority of instances this non-membership implies non-interest or a desire to remain outside of organized medicine as much as neglect to become affiliated with their county societies. If these physicians are approached personally I believe the majority would gladly join.

How may one know whether all eligible physicians in the county are members, or, at least, have been approached and urged to become members. This, if I may be pardoned a personal reference has been our difficulty. In a large county, or as in our case, in three counties, it is obvious that not all the resident physicians who are non-members of the society are known. Furthermore, new physicians are from time to time coming into the county unannounced, as it were. In an attempt to reach these physicians we have made it a plan to obtain from the Blue Book of the A. M. A. the names of all non-members. I presume this data might also be obtained from the office of the county clerk. These names are forwarded to the chairman of the membership committee to investigate. The success of such a procedure depends, of course, upon the activity of the whole society.

It has occurred to us in considering the large number of physicians who are not members of county societies that this percentage might reasonably be larger in those counties which are unorganized and are not holding regular meetings, than is the case where a live and active society exists. If for any reason it is inadvisable for a county to be actively organized might it not be an excellent thing for neighboring societies to solicit this membership? While it may be possible to join the state society directly, the individual physician needs the close contact which only a county society can give him.

As to the problems of attendance, were our ideals of membership maintained, there would be no problem. Membership implies more than the mere paying of dues. It also implies, according to the Principles of Medical Ethics of which I have already quoted, an expenditure of time and effort in order that the society may represent the ideals of the profession. This is not strange. No one would think of joining a noonday club, for instance, unless he attended regularly. In fact, these clubs make that a condition of membership. Why should the county society expect less of its members? As it is, many a physician believes, or at least acts as if he believed that his duties as an active member ceases when he has sent in his check to the treasurer. Once his dues are paid, all further interest is lost until the succeeding year rolls around. The only surprising part of this yearly performance is that so few forget to pay their dues on time. Some members, I dare say, scarcely darken the societies' doors at any time. It is obvious that such a membership is selfish. It cannot be for any other reason than the prestige and protection the county society affords.

It seems almost superfluous to ask the question, why attend the county society meetings regularly. First of all, as has just been said, an active membership demands this. If the society is of any value it should have the support of every member, as evidenced by his attendance. Again, regular attendance gives each member an opportunity to take part in the affairs of the society. If there is any time when concerted action on the part of the physicians is needed it is today. It is hardly fair for anyone to sit idly by and let the other fellow do it.

Another reason for regular attendance lies in the value of the program. The statement has been made that the county society, through its medical program, offers a postgraduate course in medicine to those who will avail themselves of it. As far as I know none deny this statement and yet many fail to take advantage of the offer.

Why do physicians neglect their county society? There are many reasons and pseudo-reasons. There is one factor which I believe offers some excuse for irregular attendance. This is distance. In our own society, for instance, there are members living as far as fifty miles from Kalamazoo. To attend an academy meeting means the expenditure of a number of hours in travel alone. During seasonable weather, to do this is not an impossible feat once a month, but during the seasons when the roads are bad, one could hardly expect these members to be regularly present. And yet, strange to say, our average out-of-town attendance puts our local attendance to shame. On the other hand, the city physician is not without his excuse. There is no doubt but that his days and evenings are so taken up with appointments and engagements of one kind and another that he can scarcely call one evening his own. He often offers this as his reason for failing to attend. Again, there are medical meetings of other types throughout the month—hospital staff meetings, group society meetings, etc. Because of these many a physician feels he may be excused from regular attendance at his society meeting. On the face of it, it might seem reasonable if a busy physician should find it difficult to attend all the medical meetings, but when we stop to analyze the attendance at staff meetings and society meetings, the personnel is found to be practically identical in each case and oftentimes

the busiest and most successful practitioners are among the most regular attendants.

And then there are the usual stereotyped reasons. One says he believes he can reap more benefit to himself by medical reading at home than by attending the meeting of his society. No one disputes the value of medical reading, but I venture to say that more reading is done by the man who attends his society meeting than by the man who never attends. Another ventures the time worn excuse that the society is run by a clique.

Analysis of almost all the reasons given leads to but one conclusion—lack of interest. How to remedy this is every society's problem. Perhaps a change of the day or the hour of the meeting may make conditions more agreeable for a majority of the members to attend. Again it is possible some arrangement can be made to emphasize the social side of our meetings. This. I believe, is something which should not be overlooked. With this idea in mind our own Academy recently instituted a buffet luncheon immediately following the meeting. This plan enables the members to meet informally the speakers of the evening and one another. I believe it has possibilities for increasing our attendance. Special features on the program from time to time are also drawing cards. On the whole, it seems to me that every program should as far as possible be a practical one if the interest of the general practitioner is to be aroused.

An invitation should be extended to every member not only by bulletin, but also by telephone insofar as that is possible. A personal reminder in this way on the day of the meeting is an undoubted aid in increasing the attendance.

Sometimes it is possible to obtain a member's interest and so secure his regular attendance by placing him upon a committee and giving him work to do.

In resume—the membership problem as we see it is largely one of approach. The physician, as a rule, is glad to link himself up with his county society for the prestige and protection it offers him if for no other reason. Care should be taken in choosing new members so that the ideals of the profession may be upheld. Every eligible physician should join a county society—if his own is not properly organized, then another.

As for attendance—poor attendance in the last of analysis is due to lack of interest and increased attendance can only be expected after this has been corrected by one means or another.

I am sure that Dr. Hoebeke has brought forth a number of interesting problems of County Society work and I think we ought to have a discussion of this paper. I think I will ask Dr. Kinsey to open the discussion.

DR. KINSEY: I was just thinking as Dr. Hoboke was speaking, that his problems are probably the experience of every one of us. I don't suppose any Secretary, that has ever been Secretary of any County Society, has not bucked against just the same prosaic things—the question of attendance, the question of getting new members and what new members to get and all that sort of thing. I have had a sort of perrenial experience before the war and since the war as Secretary. It has always been the same old story. We have tried a number of different things; we have tried what you have done here in Kalamazoo, of dinners before the meeting, and I don't think that with our Society—it is almost entirely a city membership—it has been a very great success. Even though we sold tickets in advance for the whole series of meetings, the dinners were not a success from the point of view of attendance, although a good attendance would come in afterwards; so we this year have given that up; this year we are trying something a little different. I don't know that this has been done in other counties, except Detroit, I think they are taking that up in Detroit also, and that is to lessen the meetings, the Medical meetings during the month. Of course the excuse that was mentioned here, so many medical meetings for a Staff member in the course of a month has always been a fairly good excuse. This year we have had the plan of giving one meeting each—that is, every other meeting is by the Staff of a Hospital, but we don't go to the hospital, we have them come to the regular meeting place. The meeting is under the auspices of the County Society, it is not in any sense a hospital meeting but it is given by the Staff of one of the local hospitals. In Grand Rapids we have three hospitals and they come in rotation. This, I think, has been a fairly successful plan. Then as the alternate meeting we try to get some distinguished man from away, and I think that this has been as I say a fairly good means of increasing the attendance. I think it is also well—I suppose it is done in every society, and has been done from the time they have had societies, of stimulating attendance and stimulating interest by an occasional well advertised banquet, when some man out of town who is very well known is coming. It is a very good plan of course to have a high class dinner, two, three, four dollars a plate.

It is always astonishing to see how many of the members who cannot come to a regular meeting, attend. But I think the greatest individual asset to any Society in increasing attendance or stimulating interest, letting every member know, is a bulletin. Dr. Warnshuis, when he was Secretary of our Society in its early days, was the one who established our Bulletin. It has been in operation continuously ever since. This is sent to every member of the Society and also to a number of outside men, and I am sure that this is the greatest individual asset we have in stimulating attendance and membership.

DR. JACKSON: The Secretary suggests that we have the other numbers on the program at this time and that we continue the discussion during informal round-table discussion. That seems like a good suggestion and if there is no objection we will have the other papers on the program and then discuss these later.

The next paper, "What Constitutes Attractive Programs" by Dr. J. L. Squeir, Secretary of the Calhoun Society.

DR. SQUIER: The problem of making a County Society Program attractive is really an individual problem with the Society itself. The membership of the Society is so varied. The intent of this paper is simply to be suggestive, and then it is hoped that in the discussion later on, various phases of it can be brought out and discussed at length.

WHAT CONSTITUTES ATTRACTIVE PROGRAMS

W. G. SQUIERS, M. D.
BATTLE CREEK, MICHIGAN

An attractive medical society program is the fundamental requirement of a successful County Medical Society. Without an attractive program a good attendance is out of the question.

The majority of the county societies of Michigan have a membership under 100, and it is the program of societies of this type that we wish to consider here. The personnel of such societies is varied and consequently the programs must be diversified. A program which confines itself to a narrow specialty will not meet general interest nor will a program consisting of an abstract scientific discussion prove of great interest to most members.

Programs may be divided roughly into four groups with a number of different combinations possible when there is more than one speaker on the program.

1. Out of town speakers.
2. Clinic programs.
3. Case reports.
4. Short reports on recent medical progress.

An out of town speaker of national or state wide reputation will always draw a good attendance and every society should aim to have such a speaker for at least some of the meetings. Many members of nearby county societies appreciate being able to attend such meetings and thus wider acquaintance and closer co-operation is fostered. The program committee should arrange for one or two men especially interested in the subject dealt with to open discussion after which wide participation by the members at large should be encouraged.

If hospital facilities are such as to make a clinic possible this type of program is excellent. However to be most successful a great deal of care should be exercised to present cases which have been worked out in detail and in which a diagnosis has definitely been made. As a rule no case should be presented with the idea of receiving help in reaching a diagnosis but rather, imparting something of interest to the members. It is an excellent plan to precede the presentation of a definite group of related cases by a general discussion of the condition in question, followed after the presentation of cases by general discussion. The greatest danger of a clinic program lies in the possibility of the discussion degenerating into aimless, undirected talk which benefits no one, disgusts the membership and leads to poor attendance.

Well written case reports by the members, themselves, provide an interesting and instructive type of program. Such a program is of especial value because it stimulates individual effort. There is a tendency for discussion to be unrestrained, and many valuable points can be brought out. Case reports are not difficult to make if good records are kept by the physicians, and consequently frequent meetings devoted to such reports have a double value. They not only are beneficial in giving training in making clean cut presentations, but in addition they stimulate the often neglected but very important carefully kept case record.

Five or ten minutes of the meeting may be devoted to a concise report of some phase of recent progress in medicine.

Whenever feasible, illustrations should be used. Visual presentations always help to hold interest and frequently are a great aid in making a point clear. If lantern slides are not available or feasible, simple charts or diagrams, drawn on a small portable blackboard will answer the purpose satisfactorily.

Dr. Elmer Liggett, in the Journal of the Kansas Medical Society, states that in his county society arrangements have been made with the faculty of the State Medical School whereby a series of post-graduate lectures are given. After the lecture is over the business of the society is transacted. The local men are given at this time an opportunity to present clinics or papers, and in conclusion the subject for the next lecture is announced, so that those who desire to do so may study the subject and thus be prepared the better to profit by the paper and also to contribute to the discussion. In deciding on the subject for presentation second from the next one, suggestions are invited from the members, and if two or more subjects are suggested, a decision is made by ballot. Under this plan the general interest has been marked and the attendance large. It seems to the writer that there is much in this plan that merits careful consideration.

Thus far the discussion has been confined to the purely professional aspect of the program. From time to time occasion demands that discussion of problems of medical economics, public health regulations, the defence of medical research and so on, should be made a part of the program. It is, however, unnecessary to discuss this phase of the program here.

The medical society has another function which by all means should not be neglected, and that is the social side. At least occasionally a dinner or luncheon should precede or follow the regular session. In the writer's society an

annual banquet is given, to which the ladies are invited. This meeting is entirely non-medical in nature, the speakers following the banquet are carefully selected and are almost invariably non-medical men.

It has been the intent of this paper to be suggestive. No one set medical program will continue to satisfy. Carefully planned programs, so arranged as to be of interest to the greatest number, will always prove attractive, draw out a large attendance and keep the society alive and active.

DR. JACKSON: I am sure that these papers which are presented are very full of interesting suggestions. I hope that you men will make notes as the papers are read and be prepared to discuss them when the time is come for the discussion.

I am very glad to announce that Dr. Clancy who is the Chairman of the Committee on Society Work of the Council has arrived. He has asked me to go on with the introduction of speakers and I will so do. We are certainly very happy and very fortunate to have with us today the Secretary of the American Medical Association and we will be very glad to hear from Dr. Olin West.

DR. OLIN WEST: It is a privilege for me to be here today and I greatly appreciate it.

The opportunities of medical organization are abundant and important; consequently the responsibilities of medical organization are also numerous and important, for opportunity not only implies but also imposes obligation. This is especially true when applied to physicians in respect to their relations with each other and with the public whom they serve, because they, more than any other group, can contribute to the efficiency and happiness of men or to their inefficiency and unhappiness. The greatest contribution can be made to human welfare only as physicians maintain proper professional relations with each other and with the profession as a whole, and it is not possible to define just what proper professional relations are except through the exercise of combined and co-operative judgment and wisdom.

The first opportunity offered by a medical organization is that through which all the reputable and truly representative physicians of a community can be brought into one compact group, which openly avows its adherence to the highest professional ideals, and by that avowal notifies the world of its intention to represent the best there is in medicine.

The second opportunity of organized medicine goes with and is a part of the first; it is to keep without the pale all those who do not subscribe to and uphold the ethical principles, the fundamental ideals and the professional traditions of honorable medicine and thus to identify for the profession and for the public the classes in the medical profession in a manner that will leave no doubt as to which is most worthy. These two opportunities entail very heavy responsibilities. There must be due caution, diligence and charity exercised, to see to it that no injustices are done.

Medical organization offers opportunity to bring the men in medicine with common ideals and desires into close professional and social contact, so that each may learn of the other and from the other the lessons of every day professional life, aside from those of strictly scientific application. It offers opportunity to extend the arm of friendly support around the fellow that is beset with temptations and to hold him in the straight and narrow path of proper professional conduct; to reach out the kindly helping hand to him who may have yielded to temptation in a moment of thoughtlessness, or it may be because this same hand was not held out in restraint before he yielded; to offer kindly and brotherly arbitration and adjustment of professional or personal misunderstandings or conflicts before they have grown into bitter animosities and permanent hatreds, which may come to be considered as characteristic of the entire profession by the public from whom these matters cannot be long hidden.

It seems to me sometimes, and especially in view of the many letters of a certain character that come to me, that these two important opportunities are not taken advantage of by our medical societies as they should be done. The Board of Censors in the county medical society and the Board of Councilors in the state society, and the individual members of these boards who should be chosen for their qualities of judgment, tact, probity and strength of character, can do a great deal in these directions to the honor of the profession, the credit of medical organization, and for the benefit of the public, as well as for the good of the individual physician who may be most concerned. My observation has been that it is not easy to convert a confirmed sinner nor to bring and keep the persistent medical transgressor in the paths of rectitude; and so I believe that medical organization does not offer as great opportunity as some seem to think, for the conversion and redemption of wilful and long practiced non-observers of medical ethics and defiers of medical traditions. An occasional brand may be snatched from the burning, but most of those who by choice have failed to live by the book, are confirmed and hardened in their ways; their failings appear to be constitutional and, perhaps, inherited rathen than who has long transgressed, gathered a competence for himself and seems suddenly stricken with an ardent desire to secure for himself a high seat in the temple, is one to be especially considered and prayed over before being taken into communion. It is desirable to have large and strong medical societies, but large societies are not always strong societies. Quality counts, whether it be of societies or of men. Membership drives are all right, but drives made with the single purpose of increasing numbers are dangerous.

We have had within a very short time a very illuminating instance which shows the danger of membership drives where quality is not kept foremost in the consideration of the purposes of the organization. A very splendid society, one with which I have been perfectly familiar in its workings for many years, elected an enthusistic secretary, a dandy good fellow, who became obsessed with the idea of getting every physician in the county into that society. I warned him when I heard of it and told him that he might get into trouble if he wasn't a little careful and if his Board of Censors did not exercise due judgment, but he whooped the thing up and they got in most of the men in the county. Not a great while ago one of these very men was brought before the Board of Censors on the charge of having performed criminal abortion, not once but a number of times. The Board of Censors found him guilty as charged, recommended his immediate expulsion, but there had been enough undesirables accumulated in this membership drive to absolutely control the situation, and here a man who stood convicted after a most patient, careful trial, could not be expelled from the society.

I have also known of another instance of exactly this same kind within the last 12 months. There are dangers in seeking numbers unless quality is kept constantly in mind as more important than mere quantity.

Within a few weeks I have received two letters, one from a Western State and one from a State not more than a million miles from where we are right now, informing me that the County Societies concerned could not deal with situations that need correction and need correction very badly, for the reason that men who were in sympathy with unethical practices and absolutely out of sympathy with the traditions and ideals of medicine, are in control of these county societies. That is a serious situation it seems to me.

Medical organization offers opportunity for placing leadership of medical matters in the hand of the profession where it belongs. It offers opportunity for the rightful assumption of such leadership in an altogether proper manner. It is not every man, however, nor every medical society that seems to make careful discrimination in determining just how, when and where active leadership should be assumed nor how it should be directed. It sometimes happens that matters of very minor importance or matters concerning which there has been no definite crystallization of opinion are made the subjects of great agitation.

The assumption of active leadership in movements about which there may be a very marked difference of opinion in the profession, may result to the disadvantage of medical organization if not to the discredit of the profession; but there are matters of public concern in which none but the medical profession is qualified to lead; even with respect to some of these it may be a question as to just how aggressively open such leadership should be.

Medical organization offers opportunity for providing and disseminating helpful instruction to the public without undue aggrandizement of any individual physician, and this opportunity should be seized upon and developed to the fullest possible extent; but it is not so simple as that sounds; a number of medical societies have organized publicity committees, committees on public instruction etc., and some of these committees have been altogether unable to decide upon a method of procedure. How shall the information be put before the public? What information shall be given out? Who shall do it? What safeguards shall be established for the protection of the Society? How shall the personal factor be kept secondary? How much shall be spent and where shall the necessary money be secured and how? Who shall pass on what is to be said or to be printed? These and many other questions have arisen in the councils of our committees and all of them deserve careful consideration and answer before any plan is finally adopted.

The outstanding opportunity and the outstanding responsibility of medical organization, in my opinion, is for the improvement of the scientific knowledge of its members and for their improvement in the practical application of that knowledge. *There is, as I see it, but one really great outstanding problem before the medical profession today, and that is the delivery of adequate scientific service to all persons of all classes, colors and creeds, who may be in need of the ministrations of physicians.*

There is an awful lot being said expressive of a fear of cults. There have always been cults and there always will be cults. A lawyer whom I am told has an income of more than $75,000 a year and who has attained great prominence in his profession because of his proven ability in the law, was in my office a while ago and I noticed on the third finger of each hand that he wore what appeared to be a common iron ring, and on the left wrist a little leather strap. Those things fascinated me and having had it recently recalled to me that Chauncey Depew wears an iron ring to keep off the rheumatism, I just couldn't keep from asking this man before he left why he wore those rings. As I suspected, his two rings and his leather wristlet are worn to keep off the rheumatism. Now, why should we expect that there should not be cults and fakes, when men of that position in life will believe in such superstitions? I will guarantee that if all the asafetida bags that are now hanging around the necks of children in the State of Michigan and one or two adjacent States, none of them larger than a half dollar, were piled into this room that they would overflow into the next. There is an ignorance and a superstition, there always has been and probably there always will be, that will make it possible for cults to flourish to a certain extent. *There is nothing, though, that can take the place of scientific medicine. The job that confronts the medical profession is to make the commodity that it has to deliver one of such outstanding merit that there will be no question whatever about the need and the worthiness of scientific medicine—and it can be done.* And right there, to my mind, is where the biggest opportunity of medical organization comes in. The County Society can help in its own bailiwick. If it is not doing that thing, then there is something wrong with the county Society. If the program that it is trying to follow for the improvement of its members is not working out, then a new program needs to be devised.

We sometimes forget that the bulk of the medical profession of our country are not in the centers, but are out yonder in the hills and the valleys; most of our county medical societies have not more than 20 to 25 members, a great many of them have a less number of members than that. We forget that sometimes a county society with 15, 18 or 20 members cannot hope to keep up thoroughly meritorious scientific programs and maintain the interest of their members, because after a while that group of fellows get tired of each other; but the county medical society is an absolute necessity in our scheme of organization which to my mind is theoretically almost perfect and which when it is properly operated is practically almost perfect.

We have to maintain county societies because the jurisdiction of the county society is a jurisdiction that cannot be safely nor wisely turned over to any other organization; but I have come to believe after studying the subject very seriously and watching the success and lack of success in various states as I have had opportunity to do, that the formation of district societies which will have meetings two or three times a year, will not only offer splendid opportunity for the general improvement of the medical profession from the standpoint of their knowledge of the science and art of medicine, but that they will also operate powerfully for the stimulation of the county medical societies themselves. For instance, take a district with ten counties in it: If we have the best man in this county over here to read a paper before his society, and this county over here will ask him to come and read that paper before their society and at the same time will send one of their good men over to the first society and so have the papers that are carefully prepared for county society programs read in two or three societies, the essayists, the preparers of the papers, can get the benefit of the several discussions.

They will have opportunity to make those papers very much better for presentation at a District Society. I am told that in some of the states where district societies are working splendidly, that result that I have suggested has really been accomplished; that the District Society has so stimulated the interest of those who can and will write papers, and has aroused a desirable sort of professional jealousy, to to speak, concerning the ability to write papers, that every county society in these district societies has been very greatly improved.

A very important matter that I would like to mention in this connection: within less than ten days I have had five letters come to my desk informing me of the formation of independent medical societies in places where county medical societies already existed. There is something wrong. What can an independent medical society do that the county society cannot do better? I don't know of anything. Of course, there may be some special society that has to work along certain narrow special lines, that might do better than the county society, taking up all the general work that a medical society can and ought to do, but it seems to me that that sort of situation is a challenge to those who are most definitely charged with the responsibilities of medical organization, for improving medical organization, for stimulating the zeal of county societies. Those who are most definitely charged with these duties are of course the officers of the State Association and the members of the Council of the State Association. But to get back to my proposition, that the greatest outstanding need of the medical profession is the delivery of adequate medical service to the people. Organized medicine can do a great deal and it is to my mind its outstanding responsibility to work for the scientific improvement of its individual member and to help him deliver the best service of which he may be capable to those dependent on him for medical advice and care. A member gets nothing out of a society, of course, unless he puts something into it, and he cannot contribute as much to the society as the society can contribute to him, because the society has the advantage of being able, organized effort; but when the medical socity—the county, the state, the national medical organization of this country carries helpful service to the individual member in the place where he lives or as near as possible, medical organization in this country is going to be made tremendously stronger; and when the public sees that medical organization intends to do everything it can for the improvement of the service of its members to the public, certainly the influence of medical organization is going to be made tremendously greater. Now, I do not believe at all, and resent the whines and wails to the effect that the medical profession has lost all respect and confidence of the public, I don't believe a word of it. I believe the truly representative medical profession has more of the respect and the confidence and esteem of the public that it ever had before. I believe it exercises more powerful influence than it ever did before on earth; this old cry about its having lost its influence with the public and the esteem of the public, is an one. The very first president of the American Medical Association 77 years ago made the statement in his Presidential address, and it has been repeated at varying intervals ever since. I do believe that there are tendencies shown by the activities of certain men, here, there and yonder, that need to be corrected. I think there are transgressions that organization ought to take cognizance of and punish if necessary, though I do not believe in trying to apply strict punishment to every fellow that steps over the line; I think we can bring about the desired results in a much better way; but I do believe that it is up to us to take notice of those things constantly being done by occasional men, which undoubtedly will eventually bring reproach on the whole medical profession.

The greatest opportunity to help the individual member that I know of is to give him instruction in the science and the art of medicine, and don't forget the *art* of medicine; we have forgotten it too much, in my judgment. I believe that can be done best not through the reading of papers, though papers and instructive lectures are fine and are necessary, but through the actual demonstration of the application of the methods of diagnosis, so that the individual man who has not got a laboratory at his elbow and an X-ray outfit at the other and 16 assistants all within call, and hospitals on every corner in the town, can do what a competent medical man can do without all of these things in his every day work. I believe that if medical organization will develop some scheme whereby graduate instruction, if you want to call it that or whatever you want to call it, shall be carried to the physician out yonder, who has not the opportunities that some of you have, through his county medical society, in the place where he lives or near enough to his own home so that he can actually get there for the instruction, it will make a great contribution. To that end the American Medical Association is to consider, has already considered and is considering the organization of some kind of plan whereby graduate instruction can be taken through the state and county societies to physicians in or near their homes. I believe that that offers a splendid opportunity to strengthen medical organization. And that is one of the greatest responsibilities that medical organization has now—strengthen itself for the benefit of its members and for the benefit of the public whom they serve. I thank you. (Applause.)

DR. JACKSON: I regret very much to say that we have a telegram from Dr. Tibbals saying that on account of illness he is unable to be here today to present to us the subject of Medical-Legal Defense,

I would like to say right here in connection with this, that I believe that this is a subject, the question of Medical-Legal Defense which County Societies and County Secretaries officers are not enough familiar, and Dr. Tibbals made the statement at the last meeting of the Council that he would be glad to accept an invitation from any County Society to discuss the Medical-Legal Defense plan that we have, with any of the County Societies; so that I think if you Secretaries make note of that you may provide yourselves with a good program by writing to Dr. Tibbals who said he would either come himself or send Mr. Barber, who is the Attorney that carries on this work.

We are ready then, now, for the Round-Table Discussion, discussion of these papers or any other subjects that you may care to discuss.

I will ask Dr. Warnshuis to start the discussion, he has charge of this I believe.

DR. WARNSHUIS: Mr. Chairman, Dr. West, Members of the Council and Fellow Secretaries: I am sure that the members of the Council, and I particularly, are very glad and grateful for the splendid response that has been made to this call for this conference this afternoon. I am not going back into history and tell about the efforts that have been made by the Secretaries of our component county units during the past years. You know the tribulations that we have gone through in organizational work and the obstacles that have been placed in our paths and the difficulties that we have had too surmount. However, now we feel that we are getting back, to use that old word,

to normalcy again. Those of us who are concerned with maintaining organization work feel that there is a definite problem confronting our organized members of the profession in dealing with the future and the relationship that we hold to each other, as well as to the public, and that you men as Secretaries who have been selected by the members of our State and our American Medical Association to act as their officiating officers in your respective communities, are charged with a definite responsibility in carrying out this plan. Much has been said about the need of organizing the public, and of informing the public, of educating the public, but I think as Dr. West has hinted just a few moments ago, that a probably still greater need exists in educating our own members, to render the service of the type which he described, to definitely define a relationship that we should bear to each other and the position and the individual effort that we must manifest in carrying out the work that we as doctors hold ourselves out for in the eyes of the public. I hope that this conference is just the beginning to not only an annual but possibly a semi-annual getting together of men who represent the doctors of County Societies of our State organization, where we can sit around, present our problems, discuss them, adopt a definite line of activity that is going to enable us to attain the ideals that the leaders in medical organization work not only in your State but in the Nation, are seeking to attain for the good of the individual doctor, and it is to that end Mr. Chairman, that I stand ready, and I know that the members of the Council who are present here, stand ready, and I am sure Dr. West also will join in and advise and talk over with you here in an informal way the best solution of the problems and the best policy that you can build or erect in your locality for the good of organized medicine.

I am not going to say anything more than that but just hold myself ready to answer a lot of the questions that undoubtedly are bubbling forth and have been bothering you in your minds. Some of you men have been old war-horses in the game, are doing splendid work in your localities; others among you are just breaking into the game and you are confronted with the problems that are common throughout the State, and it is for this purpose of co-operative help and assistance that we are together here this afternoon. As State Secretary a lot of my work and my duties are purely official and you might say confined to the office. Under our plan that is now in existence it is impossible for me to go around through the State and to confer with you individually and with your County Society; and so we want to make and have this meeting take the place of that conference, whereby we can talk over these individual difficulties, and I think Mr. Chairman by way of suggestion that we should not wait for one to be called upon, but that we should each right now start the ball rolling and fire the questions either at the Council, either at Dr. West or myself or any other member that you have around about you who you think can give you the information, and let us get some tangible facts that we can take home and then place them into active work in our local County Societies.

DR. JACKSON. I would like to hear from Dr. Clancy at this time, who is Chairman of the County Society Organization Comimttee of the Council.

DR. CLANCY: Mr. Chairman, Gentlemen: I want to say that notwithstanding the difficulties we encountered by way of travel, we started early enough this morning but we got here too late for the opening of the meeting, I do not happen to know how many of our Secretaries may be present; I had hoped that those from the District that I represent would all be here, but unfortunately that is not true. However, I had last hour information from them last evening telling me why they could not come over for this meeting.

I believe that the Secretaries in the counties of the 7th district are men who have a real interest in the work, but they have not gotten as yet quite hitched up to the State organization in doing it, and perhaps the fact that they are not here is because of duties that did not permit them to leave at this particular date.

We have, however, the Secretary of the St. Clair County Medical Society, Dr. Brush, and he is as Dr. Warnshuis has stated, new to the game, and personally, and I think I would voice quite within reason the sentiment of the St. Clair County Medical Society in saying that we are glad he is new; he has not as yet acquired some of the indifference and carelessness of those that we have had before and I am quite sure he is not going to because he is a live young man.

It is a splendid idea, the getting together of the Secretaries of the County Societies. I cannot think of any other agency that we have within the control of the medical organization of the country than the work that may be done by the County Societies when they have been given an impetus forward in some well planned method of handling their part of the work that is so important. We are rather prone, I fancy, Mr. Chairman, to take it for granted that the fellow is chosen as Secretary of a County Society, and how is he chosen, we usually push it over on him, he don't ask for it, his predecessor will tell him I am so damned glad to get out of this thing and I am glad they elected you, and you came in simply becaues you didn't know of the many little troubles that you are taking. (Laughter.)

It amounts to this, that the average man in a Medical Society, County Society I am speaking of, does not feel a pride in that work; he feels that he is being used by his associates in there, to sort of keep up a connection between that County Society and the State organization, that is all, and he has got to take the minutes, and if he is there he will read the minutes at the following meeting of his society. If he is not there the minutes perhaps will be read and be left over until they have accumulated several months; anyway he has not a pride in that work, and I believe he has not a pride in the work because he feels that the State Society feels no interest in him, and he knows blamed well that his associates are not so very proud of him; so he does, simply because he is willing to go on and do the things that they don't want to do themselves and will not do. I have quite a bit of a cold and my voice is rather husky, I am afraid; but the point Mr. Chairman, in this: *That in my judgment, in my observation of the work done in county societies, the work of the Secretary is of more value to the real organization of the medical profession than all the other offices in your County Society put together.*

Now, how are we going to make those men feel a pride in their work? How many County Societies, Mr. Chairman, do you suppose, may be you know, I don't, how many societies in the last few weeks have said to their Secretaries, now you go over to Kalamazoo, and here is a check to pay all of your expenses. It is true we recognize that they ought to do it, but a whole

lot of them have not done it and don't do it; they feel that it is sort of a holiday for the man, you are rather honoring him, giving him a privilege, to ask him to go over to Kalamazoo and represent his County Society, when as a matter of fact they are imposing an obligation and we all know that. I believe with County Societies, perhaps something can be done in County Societies to make them feel their responsibility, that is what the attitude of the County Society should be towards the State Society; make them feel the importance of that connection and make them feel that they are under obligations to their Secretaries beyond all others. I thank you.

DR. JACKSON: Dr. Connor, we would like to hear from you.

PRESIDENT CONNOR: Mr. Chairman and Members: I must say I was very agreeably surprised to see so many County Secretaries here. Those of the men here who have been actively associated with the State Society for 20, 30 or 40 years, realize this thing has been tried before, and for a while as I remember it succeeded pretty well and then it gradually died out. I think this is the proper idea to have the Secretaries at this kind of a meeting rather than at the State meeting. In Wayne County we have difficulty apparently this year at least of getting an attendance out, and the question naturally arises how can you get your members to attend your county meetings.

I thought last year as far as Wayne County was concerned that the answer to that question was this: if you get a real live chairman on your program committee and get some nationally known speakers, you are very apt to get a large attendance. I think 1922 and 1923 as far as I can remember they had the best attendance in Wayne County they have ever had. Of course we had a wonderful program.

This year we have had fewer speakers of that character, but last Monday night I went down to the meeting and I thought they would have a big crowd, they had Dr. Olin, he gave a report on a survey the State Department of Health has made as to the goiter question in four counties in Michigan, and it certainly was well worth coming considerable distance to hear, and on top of that we had Dr. Kimball of Cleveland, who probably is better known in this country at the present time or as well known as any man who has done any work on goiter, and he gave a very interesting talk and as I say the room was not filled; so possibly my suggestion or my thought that all you had to do was to get a good program to get the crowd there, may not be obviously correct. I don't know as I have very much more to say. I haven't any solving of the matter, outside of the fact if I was Secretary or Chairman of the Program Committee I would still go on trying to get men who are well known, hoping the fellows would come out.

The Editor of the Bulletin of Wayne County during recent numbers of his Bulletin has had a continual sob about the small special societies who meet in Detroit; he thinks those meetings keep away the men from Wayne County. I don't think that is true because I happen to belong to one or two of them, and the men who go to those meetings never have attended the Wayne County; they are entirely different in character of the meetings.

I was rather interested in the Secretary of Kalamazoo Academy of Medicine when he said at the present time they were having their meetings and then having sort of buffet luncheon afterwards. In the old days that is what we used to do in Wayne Coutny. Those nights we used to get a pretty good attendance. Possibly you have got to feed the doctors to get them to come to the meetings.

DR. JACKSON. Now a great many things have been brought up, Dr. West has given us a great many good suggestions. The essayists who have read papers have brought up problems of program and membership attendance, there are probably other things that you have in mind, the relation of your County Society to the State Society, the relation of your County Society to the State Journal, the criticisms of the work of your State Society, the policies determined by the Council and the House of Delegates, the conduct of the Journal; we want you to get it out of your system whatever you have today, let us talk things over. Dr. Forsythe, will you begin and let us go around.

DR. FORSYTHE: I don't know why you should call on me first unless I came from Ann Arbor heading the list that way. I hoped I would get down to the tail end of the list.

I have enjoyed this meeting very much. I am very glad to have been here. I have been Secretary of our Society only a very short time, and our Society has usually had quite a conservative policy, being in a University town where the clinics are being held, and a great many opportunities for the men in that county to attend scientific meetings and hear lectures, etc. This year we have adopted instead of a four program year a twelve program year, that is once a motnh. I think our Society has improved because of the increased number of meetings. Our membership jumped up 25 or 30 and I think we are having as good a year as we have had for some time for the Society. We had recently a meeting to fulfil our obligation of having an educational meeting; we made the effort to get together all the professional people of our county who would be interested in a public welfare health work; we invited lawyers, and dentists and druggists and nurses, teachers, other professional people who are handling the public, who are meeting the public in questions of health and medicine, etc. Part of our program was a paper by one of the medical men who attempted to present to those people just what he would like to have them take back to the public, as to what modern medicine is and what we are trying to do.

Then we had the paper from Mr. Bingay of the Detroit News which was most entertaining and worth while.

I think that meeting was quite beneficial. I rather like Mr. West's notion that maybe attendance would be a little better and the work would be a little more appreciated if we didn't get down on our knees and beg people to come into our society; maybe if we stood up and said we have some qualifications here and if you want to come into this group, you meet them; they will probably be more anxious. Also, I don't know why membership itself couldn't be determined by attendance as in a certain luncheon club, say, if you are absent from three or four meetings you are automatically dropped.

I know that on our roster there are some members who do nothing but pay dues. I think if some of them let their dues drop they never could be elected again. Maybe some rules as to making a certain amount of attendance requirement a requisite to keeping up membership would be worth while. Our average attendance has been somewhere around 50 per cent of our membership,

and since our membership is made up to quite an extent of men who are interested particularly in teaching and are not practicing medicine, their interest therefore is not quite the same as the average practitioner perhaps. I don't think I can contribute anything, I have no particular questions to ask at this time.

DR. FINTON of Hillsdale: Mr. Chairman: There have been so many and such splendid ideas brought forth by the gentlemen who preceded me that I hardly know where to begin. I have aimed in coming here to be able to take home to my own Society, something of value and I certainly could do that if I could take home all that has been said. Of course I can't do that, but I am going to take the liberty of asking a few questions which have been brought up by the men who have preceded me here and will speak briefly of some of the difficulties under which I have labored as Secretary of a County Society. You must understand that our Society is a small one, it is located in a country where there are no large cities, only one city of about 5,000 with surrounding villages very much smaller. Quite a portion of the practitioners you might say are country practitioners and some of them live a long distance from our meeting place, as far as 25 miles. We find great difficulty in exactly adjusting our meetings to the requirements of all these classes of men. The men who live in Hillsdale where our meetings are usually held prefer generally to have the meetings held in the evenings because they don't have office hours as a rule and are therefore at liberty in the evening to attend. On the other hand, a great many of the members who live in the distant parts of the county would prefer to have them in the afternoon in order to be able to get there and get back home before night; so we have had considerable difficulty to adjust the claims or the requirements of these several classes of men, but that perhaps can be gotten along with easily, except for the trouble which has been alluded to all through all of these splendid addresses, and that is the lack of interest in the individual practitioner. Our experience has been through a long series of years that even although we might get in men from the outside to address us, of national or even international reputation, that in many cases they would be greeted by some baker's dozen. It is certainly humiliating to the Secretary and it is almost an insult to men of this character to ask them to do that, and yet we cannot assure them of anything better. What I want to ask is some of the points which will enable us perhaps to overcome some of this inertia, some of this indifference on the part of individual men. We have been holding our meetings ever since the great war quarterly, and we have usually had a fair attendance, usually about 50 per cent of our members. Now the question arises and has been put to us by a number of our members, would we do better to call out a greater interest or would a less number have more meetings, would monthly meetings be more satisfactory? That is a question that I can't answer, but I would like to put it to the men who are here and who have perhaps greater experience than I have.

It has been spoken of the idea of giving dinners and luncheons and banquets. Well, we have tried that and it has proved in a way successful, that is, that particular meeting would be well attended, but I don't know that it aroused any more permanent interest among the members than it did without it. We have a membership in the county of about 23 out of a possible 26, so our membership is pretty fairly good for the number of physicians actually in the county. It is not so much a lack of membership, not so much that we cannot get the members in but to get an active individual interest so as to get a regular and full attendance, and that is one of the things that I want to ask the gentlemen here present to make suggestions not only for their own benefit but for mine, as to what is the best way to arouse this interest, how can we do it? Would we do it better by having more local talent instead of so much from a distance, or would we do better not to have any local speaker or anything of that kind at all and depend entirely upon our visitors' talent? Those are questions which arise. As far as the individual members are concerned we usually find them willing and glad to help along financially or in any other way; when a special need arises they are very generous about that, but in the matter of attendance, in the matter of taking hold and doing actual work, we find them very unconcerned. Some of them are willing to read papers. We certainly know by experience that we don't have to go outside of our own Society for good and instructive papers; we get them from certain members of our Society, and frequently get them—some of the best things we have ever had came right from our own Society, but how can we best arouse the interest of the average practitioner, by getting in a man from a distance with a national reputation or with a wide reputation or by depending more upon local talent? The question of the Medical Defense is one that I have pushed and brought forward to the notice of the Society as much as possible all the way through, because I have always considered it a very important one, and that has done, I think, considerable to arouse the interest of the individual members. In fact, we have so many valuable suggestions brought in that I can only touch on a very few of them and those are the principal ones, and that is what I would like to ask of those here what is the best way to arouse the interest of the individual practitioner?

Of course I feel that this connection between the medical education is a thing that ought to do a great deal for the doctors as well as for the public. The doctors bringing their views to the public, are often suspected of selfish motives; they think if the doctors give addresses or give public metings to instruct the public in things that they ought to know that they have a selfish interest back of it. They suspect them, a great many of them do, and therefore they pay little attention to it; but when the President of the Universiy, when Presidents of all the Colleges take hold and back this idea of education along medical lines, the people in general ought to know and feel that it ought to do a great deal for us as well as for the public.

THE CHAIRMAN. There are a number of us here. I think we will have to limit these discussions somewhat as to time; I think perhaps if we give each one three minutes for the discussion that we would have time to hear from anybody.

DR. THIEDE, Monroe County: I had this job pushed on me or wished on me last November. My predecessor absolutely refused to take it again, but gentlemen, I am glad to be here. The doctor here from Hillsdale County asked a few questions. I just might take a minute's time to say that up to two years ago we held our meetings four times a year and very often we didn't even have enough there to call it to order. So they hit upon the plan of holding monthly meetings with a little luncheon and getting in outside men to read

papers and we started that and for the last two years it has been very successful. We average possibly 5 or 20 members a month to our meetings. In regard to the local papers, we tried that and didn't seem to hit off very well, They didn't take much interest in papers by members of our own societies; so living near Toledo we usually had a couple of men over from Toledo and Detroit or Ann Arbor. The Legal Defense part of the State Society attracts of course. I suppose you all know a great many that you can recall, at least eight or ten men in your County who have never attended a meeting. They pay their dues regularly, very promptly, because they don't want to be let out in case that they should be sued for malpractice, and we have tried our best, I personally have tried, to get them to attend meetings, but they don't seem to take any interest in it at all. Possibly two years ago they had words with some other member, they are not on speaking terms; that is a question I would like to bring before the other members here in regard to the men who, well, we will say they have no use for one another, knocking, etc., living right in our own community, it really is a detriment to the Society, and I was wondering if some of you didn't have some of that experience and some way of overcoming it.

THE CHAIRMAN: I am sure your experience in this regard is entirely unique, doctor. (Laughter.)

DR. LE FEVRE. Muskegon: I am sorry that the Secretary from our county is not here. We have quite a thriving Society there now. I thing we have about 45 or 46 members in good standing. We have an average attendance of about 30 to 40 at every meeting. We have a meeting twice a month. Sometimes we have some outside talent, like Dr. Dodge and Dr. Warnshuis, they draw very well. (Laughter) I am not always in a position to invite them because they require special food. (Laughter.)

I would like to say a word in regard to doctors difficulties here. It is an unfortunate condition I think, to live in a community and meet somebody on the street almost every day and you can't talk to them. We don't have that trouble any more in Muskegon; we used to; we used to have a lot of it, but we have got rid of all of it. They might talk when they are out of town against somebody, but not in town, they dare not do it. (Laughter.) We got away from that by education. I don't know particularly whether it started in the medical society or started in the hospital staff, it all takes in the same people anyway, and it was more in the form of education, that for the benefit of everybody it was best for them to forget their personal feelings. We always tried to find out if there was any truth in the things that were being said against each other and we always found out that it wasn't so, that it was misconstrued, that is a good deal like a man and a wife commencing to have trouble, will find that most of their trouble is imagination, and if you can only get somebody that will take the helm and get right at it you usually can clear it up. I think it depends entirely upon the individual people in their own community to iron out all of those difficulties. The medical men are a higher type than the men that should be fighting among each other, and that should be done away with. I think it is a calamity, and it is up to the people in your own community to take hold themselves and fight it out, clean it up, show where they are wrong.

I don't know as I have any suggestions about how to get out people to meetings. We have a feed I guess almost once a month—whether that brings them out or not, but they come, and we have a very good program almost every night. Another thing we started a good big turn out in our town was bringing up the matter of contract practice, we certainly did get a turn-out. Everybody was there. There was another meeting that we had that everybody was there but one, that is when the President of the Society and the Secretary of the State Board of Registration came to Muskegon, they were quite a drawing card, we got everybody out inside of 24 hours notice to a dinner at noon. They stayed there until the meeting ended. That speaks pretty well of some of our own men in this State. I thank you.

THE CHAIRMAN: Let me ask each Secretary in beginning his talk to give the name and the Society of which he is Secretary, because, unfortunately I can't call you all by name, I hope to be able to next time.

DR. JACKSON, of Kalamazoo: I would just like to say one or two words. I was very much interested in Dr. Hoebeke and Dr. West's talk. We get along very well in Muskegon as Dr. Le Fevre told you.

We do have some troubles, and right now I was especially interested in what Dr. West said about the strength of the organization of the County Medical Societies and the plans for keeping the County Medical Society an institution that tends towards medical and public welfare. Now we are in a strange situation at home, that all but three members are against a certain system of practice and yet the minority by sitting tight have been able to run the thing their own way. It seems to me there is a weakness in the County Medical Society organizaation in the way that the minority, if they sit tight, can prevail, in this way, it is not our intent to use drastic measures to bring anyone into line. I think Dr. West has spoken about that, that is the last resort, that is, members have been prayed with and that was of no avail . I would like to know what procedure, if any, there is to bring about this thing. The matter of club practice. We are an industrial community. We have been practicing medicine under the old plan, we like it, a majority do, we have got three men that do club practice of medicine. The factories organize clubs and men go out and take care of the work. The county has declared against it, the Society has declared against it, we cannot bring the men over and we don't want to expel them, we wanted to correct their habits, but so far have been able to do nothing; we feel in an industrial community it is a mighty serious thing. I would be very glad for any suggestions.

DR. WOLFSON, Macomb County: In regard to attendance and membership: about twelve years ago we used to have—or up to three years ago, we had quarterly meetings, we would have 6 to 8, or 10 at a meeting. Three years ago we arranged for a monthly meeting with a little luncheon. Mt. Clemens, of course, being the largest city, in fact the only city of any size, ten thousand, has led the membership, and in our county we have around 32 members. We have an attendance of from 20 to 22 at each luncheon. Papers are read usually by local men. However, instead of holding meeting in Mt. Clemens we endeavor to hold two meetings in other towns, Richmond, Armadia, or Utica. We have from 50 to 60 per cent attendance at every single meeting.

In regard to ironing out a few difficulties. A few years ago we took in every single member in the county that would come in. Mt. Clemens being a

town where bathers come and strangers come, some wanted to hog the cases, in fact there would be fee splitting and things of that nature, there was a certain element that would do that. We ironed things out by taking every single member in that would come in, thinking we could control them better on the inside than on the outside. We have taken in some men who have played straight as far as we know. On the contrary, there is one man who could cure cancer, and we brought him up before the Board and we expelled him. Just as you say, Doctor, either do one thing or the other, if you can't do anything with them inside throw them out. That would be my suggestion to you on those cases. Very good, if they are treading on your toes what is the use letting them tread, that is the way we feel about it.

One thing that came up that was rather important to us. There was a certain member, a certain practitioner of our town who had gone down to Tennessee to practice. He had gone from Mt. Clemens to Detroit and Tennessee, back to Detroit, back to Tennessee and then to Mt. Clemens, and at one time he had belonged to the local society of Wayne county.

When he went down to Tennessee, he married a girl down there. He went in the paint business and he didn't practice for a few years He was supposed to have gone on the road with some man with a tablet. Of course, he didn't practice then. He came back to Mt. Clemens a year ago and he started in to practice.

We made a rule at the hospital that no member shall be on the Staff who is not a member of the County Society. Well, that man was doing some work up in the hospital, so in order to continue to do work up there he applied for membership in our Society at the same time saying he didn't give a damn for the Society. So when his application came up last fall I said you will have to give me a check for $10 for dues. Right there he knew more about that than I did or anybody else. He says, "Well, inasmuch as I applied from October to November and December for two months," he says, "I pay pro rata. I will give you a little less than a dollar." I says, "that is all right, Doctor, but our rates are $10. You will have to give me a check for $10." He gave me a check for $10 and he had a certain member of the Society endorse it. Of course your application blank says two members shall endorse them, he had just one. So we referred the communication over to the membership board for examination and for investigation and report. The report that came back from the committee was unfavorable to him, from what his talks were and what his doings had been they would not endorse him. At the same time they didn't want to bring it ot the whole Society to a vote. When it came to a vote every member that was present, over 20, the majority of the Society, including the man who had endorsed him for membership, backed up the committee by rejecting this man's application. In other words, it was unanimous to keep him out.

THE CHAIRMAN: I dislike to interrupt anyone, but we must not take too much time.

MR. WOLFSON: A question that I want to lead up to. We rejected him; then he took the matter up with Dr. Walker, who is Councillor for our district and he wanted to know the reason why he went over our Society's head. Dr. Walker came out and met the Society and practically every single member of the Society gave their version of the affair. Then he goes to Wayne County—this is my point—gets the endorsement of two members down there and applies for active membership in that Society. I took the matter up with Wayne County and they said that they would not accept his membership unless he would apply there while a resident of Wayne County. As he practiced in Macomb County the point I want to ask is this, pardon me for taking the time, it doesn't say in the Soeiety, as far as I know, in the constitution, how long a physician shall be a member of a County in which he resides before he can apply for membership. And also can a member go from one county to the other? Have you a board where you keep track of the eligibility of one member from one county to another. The thing is this, a man can be fired out of one county, rejected, then can he go into the other county?

DR. WARNSHUIS: The constitution and by-laws of the County as well as the State and the American Medical Association, state that the County Society is the only door by which a member can gain admittance to a County Society of his State and the A. M. A. There is no specified time in which he must be a resident in that community before he can become a member. In regard to the transfer, that man cannot become a member of the Wayne County Medical Society or the County Society of any other district without the consent of the Councilor of the District. County Societies are only permitted to elect to membership men who reside within the boundaries of their county and if anybody else applies for membership, if circumstances seem to warrant, as it might be where it is a little closer to attend the meeting of one County Society than it is the other, by consultation with your Councilor and his approval a man can become a member of the other Society. He could not become a member of the Wayne County Society without Dr. Walker's approval.

THE CHAIRMAN: A rather interesting thing of that sort came over in your County, Dr. Clancy, a man who was a member of the Lapeer County Society moved to St. Clair County.

DR. CLANCY: Yes.

THE CHAIRMAN: I would like to ask Dr. Walker about this because he is Councilor from Detroit. He had been a member in good standing apparently in Lapeer and he moved to St. Clair and he is a persona non grata in St. Clair County. They don't want him, they didn't take him. He keeps on paying his dues in Lapeer and then they decided not to take his dues any more. In the mean time he was an associate member, I think he wrote me, of the Wayne County Medical Society. I should like to ask what your attitude is towards men outside the County.

DR. WALKER: If he is a member of another County he is persona non grata.

THE CHAIRMAN: Dr. Dodge, have you anything to offer. Are you a County Secretary? We all know Dr. Dodge, we would like to hear from him.

DR. DODGE: Mr. Chairman, I was mostly interested in the remarks of Dr. West in regard to the care to be used in taking in members. It reminded me of some of our experiences back befor a good many of you here knew anything about organizing County Societies, along back in 1902, when the present organization of the State Medical Society was formed and when we started out to organize County Medical Societies; it happened that I was a Councilor at that time and that our problem was to organize these Societies, and some very peculiar things happened, it would seem

laughable at the present day. We didn't have any County Societies in Michigan. They had one in Detroit, they had a Wayne County Medical Society there in existence before this organization, but they had a Detroit Medical Society which did not embrace the whole county, and the first thing they did was to disband the Detroit Medical Society and they all united together in forming the Wayne County Medical Society which had been rather a small Society up to that time. That went along very nicely in Wayne County. They had special Societies in some other cities, and in one of those cities there was a good deal of opposition to the new organization; they had a little Society called an Academy of Medicine which was very, very exclusive; they had standards of their own for admission, which were very finely spun. Unfortunately for their own reputation they had a few fellows who some of the rest of the doctors did not think were altogether ethical all the time, but they had rejected some very good material and this rejected material got together and formed a counter society and the Councilor at that time was supposed to sign the endorsements to get a charter, refused to sign it. He was a member of the Academy. Well, they sent an invitation to Dr. Connor who was at that time Chairman of the Council to come up there and attend a meeting of the Academy, and he declined, but stated that any time he would come and attend a meeting of the physicians of the County, publicly called, but he would not come to a meeting of an exclusive Society, and he directed that this charter be issued in spite of the contrary views of the Society. So the present Kent County Medical Society was formed in that way. It wasn't long, a few years perhaps, the first move that some of them took there was to try and organize a new State Society, but that fell through, and it wasn't long before the Academy of Medicine ceased to exist, and they have been getting along very finely as a general organization which takes in a large number, probably nearly all the members of Kent County. I belong to a small society about the size of Hillsdale.

We have all of the doctors in the County as members; we have a number from other Counties that are close to our line that are members, so we really have more than 100 per cent membership according to our reports. We started trying to hold monthly meetings, which didn't work, but finally we have drifted without any special premeditation into holding meetings when some member of the Society wants to entertain. In the first place the entertainment was furnished at different times by those of us living in Big Rapids, but the doctors outside began to wish to entertain themselves and so we go to their towns when they entertain. The roads are so good we can go any point in the County or in the adjoining Counties in a short time; and so the one who entertains also in addition to feeding the rest of the crowd, also furnishes the scientific program, either through his own efforts or through someone that he invites; and so we have very frequent meetings now. For the last few years we have held very frequent meetings, and there has always been somebody ready, and I think the outside doctors, I mean the doctors outside of the city of Big Rapids have taken a great deal more interest in it since they began entertaining themeslves; there isn't anybody tells them when they are to entertain, that is simply a matter of their own selection and as a rule they are wanting to entertain every little while, so that we have a great many meetings and have a very successful time. I am throwing this out, a sort of a thing that grew up by itself, nobody evolved that plan, it simply grew out from the fact that the city members were entertaining alternately, and the other fellows after they had had a few of our meals wanted to reciprocate, and it has added greatly to the interest which has been taken in the society.

DR. HOEBEKE, Kalamazoo, Allegan and Van-Buren Counties: The problem of attendance has been a big problem in our Academy, at least one that has been talked of more than any other, and I find it is probably the most talked of problem in other Societies still looking for the solution.

We have another situation in our Society on which I would like to have some discussion about, it may be more or less peculiar to our own Society in that we comprise three Counties. It so happens that a number of doctors live as much as 50 miles distant from Kalamazoo, and there are a few near Ottawa County, and for that reason have joined in Ottawa County. Our membership totals about 125, which of course, entitled us to about three delegates, at least we have had three delegates, and of course, being near that figure the number of delegates hinges on just a few members, and the question I want answered was how closely should County residentship affect County membership. It occurred to me, wouldn't it be possible for every man living in a County to join that County as an active member and if he wished to attend some other County more convenient for him or more congenial for him, couldn't he join the other County as an associate member, in that way the number of delegates couldn't be interfered with in any possible way.

THE CHAIRMAN: Dr. Warnshuis, have you anything to offer on that?

DR. WARNSHUIS: I don't quite get the doctor's point. The provision as to delegates is that each County Society is entitled to one delegate for every 50 or major fraction of 50 members. If you have only 125 members the Credential Committee of the House of Delegates will only seat two delegates for you; if you have 126 you are entitled to three. Now as to the attendance, of belonging to one County and holding a membership there and attending the meeting at the other County; that is entirely, Mr. Chairman, optional with the County Society and the Councillor of the District.

DR. HOEBEKE: For instance, west of us here is Cass County, where there is no active Medical Society. Would we be entitled to enroll men from Cass County who wish to belong to the Society.

DR. WARNSHUIS: Cass is right in your district. That is entirely a matter for the Councilor of the District to decide.

DR. CURRY, Genessee County: Regarding our membership, we have 20 physicians in Flint and about 20 in the neighboring towns and we have about 118 active members of the Society with an average attendance of about 90. We meet ten months during the year, twice a month, making 20 meetings in all, and we have no local men give papers at these meetings. They are all outside men and the program is taken care of by the Chairman of the Program Committee which happens to be Dr. Marshall and he arranges his programs so that each branch of medicine is pretty well represented throughout the year. We have associated these meetings with a luncheon, and we have them at noon on Wednesdays. We don't have any office hours on Wednesday afternoon.

We have luncheon at 12 o'clock and our scientific program begins about 1 and lasts until 2 or 2:30. We did have for a while, about a year, a Clinical Society which took up the papers of the local physicians, that was replaced by the staff meetings at the hospital. At those meetings we have papers by local men, and presentation of cases which are fatal at the hospital, or interesting otherwise.

It seems to me that the attendance at a meeting is best obtained by associating the meeting with a luncheon; that seems to work out the best, at least it does in our case.

Regarding members. We require a man to be in the city six months before he is eligible for membership in the Society. Then he presents his application and has it passed upon by the Membership Committee, which is the Board of Directors. If he is passed upon favorably then he is presented to the Society.

If the Society passes upon him he becomes a member. He has to be recommended by two men.

As far as association of our Society with the public, we have placed Hygiea in all the public schools at the expense of the Society and we have placed it in the schools associated with churches and in the library. Anything which has to do with preventive medicine we make public, particularly tuberculosis, cancer and any attempts at reform; anything scientific we do not, that is kept entirely within the archives of the Society.

Reading over the State Medical Journal, I think that the Secretaries are falling down in writing to the State Secretary. I have noticed in the last Journal about three letters, one of which was my own, and one from Houghton County, and I cannot remember the other. It seems to me with the large number of Counties we have in the State that more reports should be sent in. As to what is to be contained in those letters, I think the meat of the meeting regardless of the passing of motions to send flowers or that a social program was held some evening. I believe that the scientific portion of your program should be sent in. I believe that the County Secretary should answer all correspondence promptly, as that is your communication with the outside world.

DR. SQUEIR, Calhoun: Dr. Finton's point about the individual interest of the members is a very important one, and it seems to me that this is really the meat of the matter of attendance. If individual interest of the membership can be stimulated, there will be no question whatsoever about good attendance.

I feel that this is largely a matter of the lack of feeling of responsibility among the members at large. There is an ever present idea of "Let George do it." Practically for the past two years Calhoun County has had programs contributed almost entirely of out of town speakers, most of them very excellent men, and the programs have been of high caliber. In the last two or three meetings this has been departed from and the last meeting was a purely clinical case report meeting, presented by the members themselves. This meeting was unusually successful, all the members participated and took an active interest in it. There is no question but that they feel that more meetings of this type should be held. I am glad that Dr. Stone is here, I hope that he will speak something about the phase of it. When Dr. Stone was President of the Calhoun Medical Society meetings of this nature were held alternately with meetings at which outside speakers were present, and during that period, I was not through school at the time, during that period it is reported that the Medical Society had the most successful year that it has ever had.

DR. KINSEY: I have already discussed Dr. Hobeke's paper, I don't want to take any more time than absolutely necessary. I want to speak, however, of the dark hidden mysteries, the historical past of the Society of which I have the honor of being Secretary and which I knew nothing about until a few moments ago when Dr. Dodge enlightened me. I have delved through the archives of our Society and the early minutes, which simply go on in a business like way to state how the Society was formed and so on, but nothing was said about the poor quality, the rejected branch of the tree and so on that formed the Society. I did know, however, that there used to be an Academy of Medicine long before my day, before I was a member of the Society.

I have already spoken in discussing Dr. Hobeke's paper of several means in which interest could be stimulated in meetings. At a time when Influenza was very prevalent in the community, by calling up ten men and asking each of those men to speak ten minutes on the subject of Influenza, we produced a turn out which is almost a record for our Society. I think that is a very simple way of getting a bunch together and getting a very interesting program on some live subject without any outside men at all.

Without taking any more time, I wish to speak of something which has been in my mind for some time, and that is the formation again of this County Secretaries Association. It seems to me that when it was organized before the war it was a very important organization. It to some extent enabled the County Secretaries to have communication back and forth, it bound them in a klan as it were, it enabled them to transmit the news of important meetings that were held as they were held, and often it enabled them to combine programs. A man coming from a distance if he knows he has three or four meetings near each other and different places, I think that it is quite an item, quite an inducement to get a man of reputation to come, a good deal more than to come to one place.

If it is in order, Mr. Chairman, I would like to move that we proceed to the organization of a County Secretaries Association.

A VOICE: I will support that motion.

THE CHAIRMAN: I am sure that such a motion is very much in order. Shall we act on that motion at present or shall we ask for discussion?

DR. WARNSHUIS: Hold it until the close of your discussions.

THE CHAIRMAN: What is your desire in that matter? (Hold it.)

THE CHAIRMAN: As the other members are called on for their round-table discussion we would be glad to have you give your opinion about the feasibility or organizing such a Secretaries' Association. I think it would be very important myself to do that and to make this Conference either at this time of year or some other time of year an annual affair.

DR. STEWART, Houghton, Keweenau and Baraga: I am very glad to be here today. It is my first experience. I have been in Houghton County about eight years. We have a live Society in Houghton County. We have about 45 physicians there in Houghton and the other Counties, and we have a membership of about forty. We have our meetings once a month and we have found that having luncheon helps to bring out the members,

and we get pretty good attendance, probably 25 to 30. We also hold our meetings at different parts of the County, that is, we hold one meeting in Hancock and then the next meeting in Calumet, which is 15 miles distant in the north of the county, thereby getting out the men in different sections of the district. I think that is a very good plan in order to keep up the interest, because the men in the north end of the county don't like to go to the south end to attend the meetings. We have also found it feasible to change the date of the meeting and we are having our meetings on the first Tuesday of the month. Previously we have had it on Monday. I have found in my short experience that our meetings are better attended and there is more interest shown where we take up one particular subject and have that subject thoroughly covered, as in our February meeting we had the Goiter problem thoroughly taken up and we had short papers and talks by various men on this particular subject, and did not take up anything else. We had also at that time a good many members of the laity present, people interested in public health work. We had quite a large attendance, a dinner preceding the meeting. We also find we have better interest in our meetings if we hold our meetings at the hospitals. Now the next meeting we are going to hold at our County Tuberculosis Sanitorium, the general subject, "Tuberculosis," will be taken up. We have also had our trouble about Contract Practice, in fact we have contract practice very prevalent in Houghton County. One time there was a motion instituted that all doctors who are members of the County Medical Society should not do contract practice. However, this was killed and the motion did not go through. I am heartily in favor of a County Secretaries Association and would be glad to attend if I am chosen Secretary next year. I thank you.

DR. STONE: Councilor from Battle Creek: I think Houghton County or that Society up there comprising three counties, should be congratulated upon having a Secretary who makes a trip of this sort for this meeting. It is certainly evidence to my mind that a Society of that sort of Dr. Kinsey's motion will bring about an interest among the Secretaries which has been very much lacking in the last few years. Last September at Grand Rapids when this subject was discussed at our Council meeting, I was in favor of it, but I must confess I was a little bit skeptical. I am very, very happy to see the number of Secretaries here and the attendance that we have had today, to the wonderful program which has been put on. It is bound to be of great benefit to everybody concerned. It is going to make better Secretaries, better Councilors and individually better members of the Society and better County Secretaries.

Dr. Squeir alluded to a time when I was honored by being President of our local County Society. Briefly the history of that Society has been this: They were having, when I went into Battle Creek four meetings a year; about ten years ago we got that number increased to six and about seven or eight years ago it was increased to eight. About that time I was chosen as their President. I had been talking increasing numbers of meetings for a long time and having one or two or three or four friends who were with me, it was made possible by a motion going through our Society for a special meeting each month, and the number of the regular meetings was increased to ten; the special meeting, by the way, was to be called at the call of the President if he saw fit. So we called a special meeting every month, giving 20 meetings that year. Our programs were made up early in the year for six or eight months ahead, and they were varied, some of them put on by local talent, but the majority of them were put on by men from outside.

We also made an effort at that time to interest the members of the Kalamazoo Academy and our other neighboring County Societies in attending our meetings. We in turn attended theirs more or less. The result of that was this, that where we had had an attendance of 20 or 25 at the beginning of that year, before that year was over we were having 125, 140, 150, 175 and 200 men attending our meetings.

We had no trouble in getting up programs, we had no trouble in getting men out. I believe one of the secrets of having successful County meetings is an attractive program, and the creation of harmony through some source of good fellowship and friendship among your members. I think good fellowship and friendliness among your members is more important than anything else. The only way you can ever bring that about is by rubbing ankles and elbows and stopping your knocking.

DR. KUDNER, Jackson County: We have a peculiar situation in Jackson County that I would like to bring up for your consideration. I am just new myself. I have only been Secretary for a few months. We were only meeting every three months until the first of this year, because we have a city hospital there whose staff is almost identical with the personnel of the County Medical Society, and they had very good programs at the staff meetings, had from 30 to 40 men out every month, and they thought they sort of pushed the County Medical Society in the background, these staff meetings. After the new election the officers of the Society got together and decided that the County Medical Society was more important than the staff meetings, because it was the foundation of organized medicine, and we decided that we would have monthly meetings, have good programs, outside speakers and good meetings, and we did not want to try and rival the staff meetings, although the personnel of the two are almost identical, so we called these special meetings, and whenever we want to, we have one once a month, we set a special date. We do not have a regular date to meet. We have had two very successful meetings. We had Dr. Oschner from Chicago to the one in February, and we had a very successful meeting, had about 60 men out. We sent out invitations to the surrounding Counties, I think probably some of you men got them, and we had a very nice meeting.

I think that the success of getting the men out is really in having attractive programs. The staff meetings take up case reports and occasionally they have outside men too, so that it practically now makes two meetings a month. Some of the doctors now are kicking on too many medical meetings, some of them belong to the staff at the other hospital, so that is three meetings a month for them. Of course they have to have the staff meetings to keep up their grading with the American College of Surgeons.

I was just wondering if there wasn't some way to get around that to combine the staff meetings with the meetings of the County Medical Society.

Another thing I think is very important in County Societies in creating good feeling and that is a social meeting occasionally where you don't

have any program. We had one in January and had a "pigs hock and saurgraut dinner" at one of the cottages at the lake. It was on a rainy night in January, but we had a record attendance, didn't have any program, just had a social evening, a little poker and so on and so forth. I think those things always create good feeling among the men.

Another thing we have had in Jackson that has been quite successful, is Clinic week, in the spring, it usually takes up three days. We get men from outside to come and spend the whole day there or half a day, see cases and talk to the doctors at night. I think they will be more successful if we can spread them out instead of having the whole thing in three days, have about three during the year, have the visitor for instance in the morning or in the afternoon see the cases that interest the doctors, help them with their problems, and then at night have a lecture. I am going to try to work that out this year. So far the clinics have been very successful in the spring and always plenty of clinical material. We try and work the cases up as well as possible; sometimes the clinical material is so abundant we can't work them up as well as possible. I would like to have somebody answer this question with reference to the staff meetings interfering with the County Medical Society meeting.

DR. ————, from Saginaw: We have a very active live Society, a membership of 69 out of a possible membership of 73. The problem that Dr. Kudner brings up we have had to deal with in our County. We have in our city three city hospitals, as Dr. Kudner said it is required to hold staff meeting once a month in each hospital, to come under the approval list of the A. M. A. hospital. It is our aim to hold monthly meetings in each hospital. Once every month we do that. We have case reports from each hospital, one hospital will give a case report by one doctor. With that we have an outside speaker to bring a little more interest into the meeting and by doing that we seem to get in all the necessary things, it has brought out a very good attendance at each time. I think one way of getting a very good attendance is a fight. We certainly have had lots of fights in the last year or so; we haven't had sitting room for members, they all come out, all pay their dues. We have lots of fights. There is a very friendly feeling amongst the doctors; it is not a personal affair at all. It is about some subject that we are all interested in.

Another thing Dr. West brought out, it seems of interest to us, besides our County meetings is a district meeting. Dr. Curry from Genessee County tomorrow, I think it is tomorrow afternoon, is trying to arrange a Tri-County Society, that is, Bay County, Saginaw and Flint County. Genessee county has got a very attractive program and has invited our members in, and Dr. Curry was very nice in sending post cards all printed and ready to be mailed out, to our Society.

Dr. WERSHOW, from Ingham County: I am a novice in the game, having just been drafted last November and I found they were glad to find a new man to take the job, one unfamiliar with the details of the work. The work was handed over to me, a lot of detail apparently, and I saw the reason why it was not a popular job because it required a great deal of attention, mailing out cards, getting those things printed, arranging for meetings, etc., as you all know. I have attempted to simplify the work somewhat and I might offer to present some of the things that I did, perhaps it would help some of the other men in some of the County Societies, the Secretaries. One thing I did was to do away with the mailing out of cards which is quite a detail for the Secretary. I have arranged with a commercial service that make a business of mimeographing or typewriting, sending out notices. All you give them is the mailing list you want and give them your notice over the telephone, put your own name on the list; the next morning you get your card. It only takes them two or three hours to send out any number of letters or cards and at the end of the month they send you a statement for the mailing and printing and paper and everything and usually the amount is less than an ordinary printing job would be for the notices. That takes a great deal of that sort of mechanical work away from you.

I have also placed the city editors of both papers on our mailing list, and doctors of the surrounding counties who are not members. I feel that the men in the smaller towns should receive notices, some of them belong to Societies but can never come to the meetings because they are busy with their work; they can get away occasionally to a State meeting of special interest to them, if they are informed why they will occasionally break away from their work to come to the meeting. Another reason why I put them on our mailing list was that I wanted to centralize, I wanted these men within a radius of 50 or 60 miles from Lansing to know that there are men in Lansing who are interested in medical work, and if they have any problems they should come to Lansing with their problems, and if this thing is kept before them all the time it will be a matter of a little while when they will develop an interest.

Now, when I joined the County Society, like in Lansing, I was impressed with the lack of interest. Of 90 members in the County, always about 35 turned out to a meeting and only about four or five that do the talking, they are the same group always. I wonder why. Everyone here has stated that there has been a lack of interest in their respective Societies. I came to my own conclusions and the conclusions that I came to is this, that the County Societies, the membership in the County Societies carried no prestige, there was nothing imposed, there was no obligation imposed upon a member to belong to it after he joins it, and the Society gives him no prestige for belonging. He belongs for certain reasons, a legal reason or if he wants to come sometimes and listen to a paper, but I feel that a County Society or any medical organization that impose certain obligations on its members, not merely the payment of dues, but there should be a certain prestige maintained in membership. That belonging to a certain organization is an honor, is an accomplishment, and I feel that that has been sort of put aside for the privilege of getting members. They want everybody in the County that dispenses medicine, and in that way every County Society, and I know that ours probably is no exception, I know ours is that way and I feel that the others are no exception, for good sensible men who are really poorly qualified to hold membership in any scientific society, and instead of looking for large numbers we should rather look for quality in getting these men and developing these men after they come in.

Dr. West stated that in the last ten days he received five or six communications from centers where men have organized independent medical organizations and Study Clubs, etc., and Dr. West wonders why the County Society can't do the work. In our city we have also organized a small

group Study club of ten or twelve men. These ten or twelve men felt that the County Society was not filling the place of the work that they should do. We get a man from outside who is a big man, and he will give us a talk, some special subject, a few men will discuss the paper, the bulk of the younger men who are just from clinics schools where clinics are held, are unable to express themselves because they are so young. They feel that Study Clubs of five and ten and twelve should get together around a round-table without any formality. They themselves should present papers and problems and discussions. Each man individually can get up on his feet before a small group and express himself. I know in our organization very few of the younger men ever get up and express themselves. For some reason or other they feel that a small Study Club, a group of five or six or seven should meet once in two or three weeks amongst themselves and study these things, and so we have a little Study Club in our city. It is an independent organization now, all of the men in the study clubs are members of the County Society, but it is the intention after it becomes firmly organized to transfer its work under the auspices of the County Society and see if we can organize a number, five or six or seven smaller units to study amongst themselves and perhaps once or twice a year to have a joint program. They feel that the County Societies are too formal; they don't make an effort to develop individual men within the Society. They will bring men from outside, or the old heads from the Society who always do the talking, predominate at the County Societies and the younger men don't get the opportunity or else they don't take the opportunity.

DR. SCHULZ, Branch: Dr. Clancy, I am a freak, I am a new, old Secretary, this is my third experience as Secretary of Branch County Society. I was elected Secretary on the reorganization of the Branch County Society. Twenty-four years ago Dr. Bulson from Jackson came out and organized the Society. The older doctors were scrapping among themselves, there was a lot of jealosy, and we had some pulling together. We have a small Society and we have a small County. We have only twenty physicians of the County. We have about fifteen active members, fifteen that attend regularly. We are meeting now every month, we used to meet once in three months. We have a luncheon at our meetings and we vary our meetings. We have outside men come in, we have some very good programs, and occasionally we have what we call a closed meeting. We have a meeting about once or twice a year at the physicians' houses and have round-table discussions and talks on different subjects. We also have an annual picnic every summer at the lake; we have no program at this picnic, it creates a little interest and keeps up the enthusiasm. We also have an annual banquet in the winter time. I believe I can see a great difference in the Society since I first belonged 24 years ago. Education and organization has made these County Societies what they are. It was a difficult matter at that time to get some big man from the outside, in fact it wasn't the general practice for men from the larger cities to come over and give a paper or talk at our society. Now they are perfectly willing and want to come, it helps them and it helps us, and I think that we can create an interest and a better attendance in our Society by publicity. I think every man wants to belong to a Medical Society, if he is active in practice, and if we make it a rule that if he misses three or four meetings without any good excuse, to be dropped from the Society, I believe the man would be willing and anxious to stay in the Society and would take more interest in the meetings if we do that. I think I will make that suggestion to our Society because I know there are four or five members who pay their dues, but that is the end of it. I know if they were to be dropped that they wouldn't like it. The Tri-County Medical Society suggested here I think would be a good thing with Hillsdale, Branch and St. Joe. We had a get-together meeting with St. Joe last year at Sturgis and had a very good program. We are going to have another one this year. I think Branch Center is between Hillsdale and St. Joe. I think it would be a good thing for the three Counties to get together once or twice a year. I am heartily in favor of this organization of the County Secretaries.

DR. BUSH, St. Clair: I am young at the game, this being my first year. We have a membership in St. Clair of about 53 or 54. I think every man that is eligible in the County of St. Clair is a member. We have our meetings on the second and fourth Thursdays of each month, with a dinner at 6:30 and the meetings after, and I thing our attendance has been better than 50 per cent.

At the beginning of last year we started having men from out of the county come in and read papers and as far as I can remember, I think in the last year, up until this time, two of our local men read papers. I wonder if it is a good plan to have outside talent all of the time? Does it create a good impressio namong the public? Someone brought up the subject of having a man reside in the county for six months to give the members a chance to look him over, see what caliber he was. That very thing was brought up at our meeting last week, when one of our men made a suggestion that we adopt in our by-laws that a man had to live in the County six months before he became eligible for membership. I think the conference of the State Secretaries should be held every year, I think it is a mighty good thing.

DR. TAPPAN, of Ottawa: I am in my second year as Secretary of the Ottawa County Medical Society, and my report would be very much similar to practically everyone that has reported here. We have practically the same problems and we run our Society very much the same as to dinners, attendance, etc. We firmly believe in the adage that the way to a man's heart is through his stomach. I think that will prove out in almost every instance; have a dinner and you will get the men out. We meet at noon and have our meeting immediately after. We use both the internal and external talent for the meetings. We have had one thing that has been mentioned in our program arrangement. We divide the Society into committies of three or four giving each committee one month to provide a program and it has worked out very successfully. We have one of those men as Chairman and the others working under him of course; these committees seem to take quite a bit of interest in getting up their meetings and we have a good attendance.

We had just a little bit of friction and we have had a little bit of trouble during the last year, principally on the line of ethics. We had one man come into town who insisted on advertising. He got out some cards in the beginning. On those cards he gave his residence and his office hours, etc., and a little statement at the bottom that he was specially prepared—it said equipped—to do surgery at the home. That, of course, took with a number of ignorant people, and was very suc-

cessful in getting three or four families together in one home, taking out the tonsils of all the children of those families. He did quite a bit of work of that nature. He did some questionable work in the hospital when he first came and subsequently we had to bar him from practice in the hospital. That was taken up before the Society, we threshed that out thoroughly. One thing brought up about this man was that during this first year, there began to appear a few anonymous letters written not only to doctors, but also lay people and nurses at the hospital, and these letters seemed to be all the same handwriting. We took the precaution of having that handwriting put before an expert and he declared the handwriting of the ananymous letter identical with the handwriting of some known piece of work that he had done. It was taken up before the Society. I was interested in Dr. West's statement about the membership drive getting in these questionable men who will support such men as those. I would like to ask, what are you going to do with a bunch of men who have been in Societies practically from the very beginning of the Society and who will support such a thing as that? We didn't have and we couldn't get enough men in that Society to convict this man and throw him out of the Society. I presume it was our own fault, may be we didn't go about it in the right way. We haven't taken it up before the Councillor of the District, and the last month or so the thing has dropped and nothing has been said about it, waiting for further developments I presume. If there are any suggestions I should be very glad to have them. Otherwise we have a very live Society and a very successful Society.

DR. JOHNSON, of Ionia and Montcalm: I feel, gentlemen, the grain of this discussion has been so thoroughly threshed out that there is very little for me to do except to hold the bag. The Montcalm Society united with Ionia just about a year ago this month. The present membership is represented as follows: 14 members from the original Ionia Society, and 15 from the Montcalm Society, making a total of 29. The non-membership is represented 12 in Ionia, 8 in Greenville. Out of this 20 non-members I should judge there wouldn't be more than half of that list eligible on account of age and other conditions.

Our meetings are held monthly except during the winter season, when the road conditions are so bad it is impossible to get a membership attendance sufficient to invite anyone to come in to speak to us. The meetings are held in rotation, Ionia, Greenville and Belding, which favors the people by getting them as near to the meetings as possible. One thing I can say, Dr. Clancy, I feel it has been a pleasure to me to have been the goat, it has been a pleasure to me to attend this meeting, I have got some very valuable points that probably will assist us in putting on our drive and making our Society more active than it is at present. Our membership of 29, our average membership in attendance is usually from 20 to 22. I think we have the same difficulty with certain members as other Societies in the fact that there are always a few members, that belong purely from the moral support they get, but never attend meetings. It is a very difficult matter to get them out. The problem of personal animosity among our professional men I can very gladly say is very little. Among the men in our County particularly there is excellent feeling, a wonderful feeling of good fellowship and friendliness. Personally I feel in regard to this matter of friendship that if you wish to have friends the best way to bring that about is to be friendly yourself. One way we have stimulated a little personal good fellowship is by letting the professionals do the fighting. In other words, occasionally we round up the men and take in a good prize fight at Grand Rapids or attend a social dinner or go to a show. That stimulates a wonderful feeling of good fellowship and irons out a lot of little petty differences. The time has passed rapidly and it is getting late There is only one impression I would like to leave and that is this: I think that if every physician would make it his duty to absolutely deliver his best at all times, to give honest, conscientious service seven days in a week and 365 days in a year, we will have less to fear from the other cults.

DR. WARNSHUIS. Mr. Chairman, the theme or the general thought that has predominated through this splendid discussion that has been participated in by the Secretaries, seems to bear upon the frequency of meetings and the maintenance of members interest. Dr. West's train leaves in an hour and I am sure that with his wide experience he might be able to give us some definite tangible message in regard to those two things.

DR. WEST: Mr. Chairman and Gentlemen: First I want to express again my sincere appreciation of the privilege of having been here at this conference. I don't know, it may be that this particular conference is like many others in that it is attended only by the very best and most active men among the secretaries. It is a fact that those who are here are thinking sincerely, seriously, earnestly and honestly about the problems that we have to deal with, and it seems to me that this particular meeting and the sentiment that is in evidence is guarantee that these problems will be dealt with and be successfully dealt with. A lot of things have happened here that have interested me tremendously. When Dr. Wolfson told about that fellow that went to Tennessee and came back, as I am a Tennesseean myself, I knew that there was something wrong with that darned fellow. (Laughter.)

Dr. Dodge's story reminds me of a letter I received a year or two ago. Before I tell you about it, however, I want to say that Dr. Dodge—Dr. Dodge, and men like him—ought to write down for permanent preservation more than they have written of the story of medicine in this state. It would make a wonderful story, romantic and fascinating, and it is a pity that the history of medicine and medical organization in individual states has not been better written and better preserved.

What he tells you about one of your fine societies that was organized by rejected men, I am reminded of a letter I received about a year ago from a man out in a western state. Having noticed that he was President of his County Society and that his name was not on the Fellowship Rooster of the American Medical Association, I sent a letter inviting him to be a member of the American Medical Association. He wrote back and said: "Dear Doctor, some years ago I came out to this country and I found a bunch of crooks out here in charge of the Medical Society. I didn't have anything to do with them, so I wrote the American Medical Association and asked them to let me be a member, and they told me no, they wouldn't have anything to do with me. Now all of those "sons of guns" have died with delirium tremens, I am the President of the Society and you want me to get in. As far as I am concerned you can go straight to hell." (laughter.) I wrote the man a very nice letter and tried to smooth things over. He wrote back and said he had been thinking about it, and inasmuch as he couldn't see

much difference between hell and Chicago, he thought he wouldn't press the matter any longer and we could stay where we were. (Laughter.)

Now I don't know whether all of those men that organized Dr. Dodge's Society have died off or not, if they have I hope they didn't die with D. T. It has been a long time ago and there was a reorganization from the bottom, at the time that those things Dr. Dodge tells you about happened.

There has been a conservative estimate made that 15 per cent of the men in medical organizatons do its work. I believe that it would be nearer true to say that 10 per cent or less of the men in medical societies do the work of medical organization. I think we are to blame for that to some extent. I have been a Secretary of a County Society and a Secretary of a State Society and Secretary of a National Society, and more than that, and a whole lot worse than that, I at one time was Secretary of a State Board of Health. Now I know what it means to be a Secretary. There is a large disposition on the part of members, and an unfortunate disposition, to let the Secretary do it.

There is too much disposition in some quarters if my observation is correct, to let the Secretary do everything. I believe with all due respect to the Council of the Michigan State Medical Society and every other State Council, that many of the problems that have been mentioned here today and that are confronting the secretaries of all societies, could be straightened out, solved successfully finally, if the Councilors would get right on the job where these problems are. When you put all the pressure that medical organizations can bring to bear on these obstreporous fellows, you can either get them in line or put them in such a fix they have to get clean out of line and stay out of line. I walked down the street of a city in my own state one day and met a farmer whom I had known a long time, a rich man who lived in a splendid community where there were two good doctors, one and old man and one a young man. I stopped and spoke to him: "Hello, what are you doing down here?" "Well," he said, "I came down here to see a doctor, a member of my family is sick." I said: "What are you doing, coming way down here to see a doctor; you have two good doctors at home." "Well," he said, "Maybe I have, but I will tell you," he said. "Old Dr. A. has been pouring into my ears and everybody's else ears for a long time that young Dr. B. is a young whipper-snapper that is just out of college, and hospital, and don't know a darned thing, and of no account and unsafe," and "Young Dr. B. tells me that old Dr. A. is a darned old mossback that has forgotten everything that he knew that was worth knowing. I believe both of them." (Laughter.) "So when I want a doctor I come to Knoxville." That was a splendid opportunity, and it proved afterwards to have been a splendid opportunity for a Councilor to get on that job up there and straighten young Dr. B. and old Dr. A. out. The Councilor got them to see how they were not only hurting themselves, but hurting the entire profession of medicine.

Now, somebody here said smething about the need of the young man. I am not opposed to these study clubs that our young friend over here talked about, I am for them. I belonged to a study club for years. There were about fifteen of us in the study club in a city of 160,000 population, but I will tell you what the conditions of membership in the study club were: No man could belong to it who did not belong to his Medical Socity, and no man could belong to it who did not pledge himself to a certain reasonable attendance on his Medical Society; and it, by the way, met every week. So the study club is all right, either for young men or old men. There are some old men that could be improved by joining a study club, but these independent Societies I have talked about in my opening statement are proposing to do the very thing under their constitution and by-laws that our County Societies are supposed to do under theirs. I can't see what the necessity for that is unless it is a bunch that wants to disrupt the County Medical Society and wants to destroy its influence. I believe that it is possible that in some County Societies the young men are not properly urged, are not given proper consideration, in fact I have been in one or two where I think that is quite true. On the other hand I think that in some County Societies the older men withdraw themselves entirely to the detriment of the Societies. Now my notion is that if we could pay due attention to the assignment of specific duties to the young men and to utilize the services and the mature judgment of the old men, where they can be best utilized to advantage, to give every class in the Society some active part in its work, it would be a good thing. I believe it is a good thing to give every man in the Society so far as can be done, something definite to do. I don't believe in having too many committees, but change them around a little bit and give everybody something to do a part of the time.

I was very much interested in Dr. Connor's statement about the success of the program in Wayne County last year and year before when they had all together outside talent on their programs, and then I was particularly interested when he went on to say a little further that this year they are not doing quite so well. Now, personally, I am not surprised at it. I believe, after watching the situation from a vantage point, that it is a mistake to have all outside talent on your program. I don't believe it offers opportunity for initiative and development of men in your own Society; I don't believe it gives them opportunity to make the contribution they can make. I don't believe it encourages men to develope, where they can make specific contributions that are worth while. So my personal opinion is that it is a mistake to give your program over entirely to outside men.

We have a lot of members in the medical organization that have been talked about here this afternoon that pay their dues and never do anything. They constitute a problem. I have had a lot of them tell me the only reason they belong to the County Medical Society was that they want to be examiners for Insurance Companies that will not give them jobs as examiners unless they are members of the County Medical Society, and they are perfectly willing to pay two dollars a year dues in order to get to do a thousand dollars worth of insurance examination. This question of dues is one that might be well talked about. I am encouraged to believe that there is a growing tendency toward the increase of annual assessments of dues in our County and State Societies. I think that is a very encouraging sign, because you can't do a great deal without enough money to be sure of yourself and to have things to do with.

The question of Club Practice is getting to be a very serious one all over the country. I have right now on my desk two letters, one I received yesterday afternoon and one day before yesterday afternoon, telling me of a development that I had never heard of before. One of them is from Birmingham. It seems the department stores in these two cities are now developing medical services of their own, and each employe of the department stores pays twenty-five or fifty cents a month, I have forgotten which it is, and the store management employes the physician. County societies are writing in to know

what they ought to do with those fellows that are doing that kind of work. It is getting to be quite a question. There are several societies that have within the last year dealt with this matter of contract practice, and they dealt with it very positively by just simply adopting a definite understanding officially that no man who did contract practice or club practice, could be a member of the Society. They told the public about it very promptly, and they handled the situation very satisfactorily.

Some one here told us that it is difficult for some of the members to get to the place where the meetings are held; there are some Counties where it is practically necessary to hold the meetings at one place, but it seems to me that it is fair that they should be held alternately at places that will suit the convenience of the men in the different parts of the County.

I believe that one of the most effective means of maintaining efficient organization is for the County Society, no matter whether it has fifteen members or a hundred and fifteen members or a thousand, to have some sort of a Bulletin, even though it be nothing more than a postcard. I think it was Dr. Taylor who is Secretay of the Oakland County Society who had a plan whereby he not only got out a bulletin, but sent around a little red freight tag, just an ordinary freight tag, to hang on the doctor's telephone. That tag just kept bobbing right at the end of his nose every time he went to the telephone to remind him that that County Medical Society was going to meet next Tuesday evening or next Tuesday morning, whenever it was—I believe they met at noon. Those little things all count, they help a great deal in my judgment, but a Bulletin of some kind, even though it be nothing more than a letter, and it won't take a Secretary with a small membership very long to peck out a letter on a typewriter, helps wonderfully to maintain interest and organizational efficiency.

Somebody said something about correspondence and I said "Praise God from whom all Blessings flow that somebody said something about that." If you will come down to my office I will convince you inside of two or three weeks, if you will stay with me that long, that many of the Secretaries and other officers of medical organizations of the United States are paralyzed, or that they don't know how to write, or the ink has run out or something is wrong with them, because it is just almost impossible to get prompt replies to officiel correspondence. Now they will answer any fly up creek proposition that comes from anywhere else on earth, but you just send them official correspondence and you will find it hard to secure a reply. Now that is unfortunate. It is unfortunate in the extreme, and it is sometimes so unfortunate that it interferes very, very materially with the efficient working of Medical Organizations.

I found from the observation of several County Societies in my own state that it was a splendid thing to vary the program once in a while and to have a lawyer come in and tell you something about law, or to have a college professor come in and tell you something about psychology, and to hear some other subject discussed by professional or business men; occasionally to have a banker come in and tell you some of the things that he can tell you that may be commonplace things of business, but really essential for the the doctor to know. I believe that is a suggestion that will help in some instances, to give your programs over to men from outside the medical profession that can tell you things of real important interest to physicians. In some places that I happen to know of, the hospital staffs are serving a splendid purpose by having their meetings at a convenient time and inviting all the County Society members to attend. Of course there are some things that the hospital staff must consider privately, after that has been done the doors are opened. I am glad to note that there are a lot of new Secretaries in Michigan. Every once in a while you know you find a fellow that was born a Secretary, and you can't beat him. Every once in a while, too, you find a fellow that has been Secretary so long that he has gotten into one groove out of which nothing on earth short of four tons of dynamite could blow him. So it helps, I believe, generally speaking, to have some new Secretaries every once in a while, and certainly, Mr. Chairman, my vote is that the new ones in Michigan are going to make things hum.

I am very grateful to you for your kind courtesy.

THE CHAIRMAN: I will have Dr. Warnshuis close this discussion.

DR. WARNSHUIS: Mr. Chairman. I have nothing more to say except to answer any other questions that you men might have. One thing that the Secretary from Genessee brought up, regarding the reports of your County meetings. The Journal has always sought to secure and obtain these reports and publish them as promptly as possible, for two reasons: In the first place, I believe that they form and will form in the future a medical history of our medical organization activities in the State: it may be referred to in the years to come. In the second place, as you pull off some stunt, or some special meeting or have some special feature of your program, and you send that in for publication in the Journal, your fellow Secretaries across the State, in the Upper Peninsula, or down in the lower tier of Counties may gain an inspirational idea and put the same thing over there. We are always glad and eager, in fact we want reports of your monthly or weekly meetings. Unfortunately, sometimes they are a little old by the time they are published, because we have to close our forms at a certain time of the month, and if your report comes in late, or a few day's after the forms are closed, it necessarily means holding it over until the next month. However, you will notice if your report is not published this month, it always appears the following month.

Now, as to the reports regarding your payment of dues. Just at this time of the year we are more or less swamped with the receipts of dues, and the work entailed in mailing out membership certificates. However, during the last part of this month, you will receive for your county our office record of the non-paid dues in your County. I wish you would check those over promptly and carefully in order that we may not do an injustice to any man and place him on the suspended list, discontinue his Journal, or deprive him of his Medical Protection. We are particularly anxious to have that report in this year promptly because our delegates to the American Medical Association are determined by the number of members that we report in to Dr. West as existing on April 1st.

I think the general discussion has been of benefit to us all. I am heartily in favor and hope that the Secretaries will organize this County Secretaries Association, and carry on a program similar to what we have had here today at least once or twice a year. As you probably noticed, we have a Reporter here, it is my purpose to publish all of the papers and the discussions that have taken place this afternoon in the Journal for the benefit of those County Secretaries who unavoidably or otherwise could not be present today.

I think with a little work and with a little help on your part we can make this a live going organization that is going to advance the interests of our State Society as well as that of all our County Societies.

THE CHAIRMAN: I hope there won't any of you go until we have voted on this proposition of Dr. Kinsey's.

DR. HARRISON: I would like to say, Dr. West spoke about correspondence; some three or four months ago I sent out a letter to every County Society in Michigan, asking them to take a census of ethical practitioners; I think I got a reply from about 25 per cent of those secretaries, and even those replies were delayed to the extent of two or three months. We had an idea of bringing an injunction suit against the chiropractors of Michigan for conspiracy; this was meant to furnish the people interested in this injunction suit with the names so that they could put them in the injunction. That has been held up because we hadn't the information. The secretaries don't seem to be interested in enforcing the medical act; they seem to think it is somebody else's business. It is the business of the prosecuting attorneys, but in interviewing the prosecuting attorneys they tell me that they absolutely get no support from the medical men. They assume that the medical men don't care whether these men are practicing there and raising all sorts of hell or not. They say when they get support from the medical men that then they wil take notice and bring prosecutions against them. Until they get that they simply assume that the doctors in the vicinity are not interested whether these men are practicing there illegally or not. They are spreading all sorts of propaganda charging the medical profession with all sorts of crimes, and yet there isn't a single answer by the medical men or through the Medical Society to any of this propaganda that they are spreading.

The Judges of the Court said they don't know, they can't imagine why the medical men are so dumb about this kind of thing; they say it couldn't take place with lawyers or any other profession, but they simply do nothing or give no encouragement whatsoever.

I think the intelligent communities expect from the medical men certain information and certain protection, not only protection against disease, infection and all that kind of thing, but against quacks. If medical men simply sit still and do nothing, give no information at all, even when they advocate the "crime of vaccination," the crime of giving antitoxine, as they do openly in the local papers, no answer whatsoever appears.

It seems to me, if you took more interest, if you went to the prosecuting attorneys, stood behind their prosecuting attorneys, that there would be more successful co-operation.

In Detroit, for instance, our Health Department considers it its duty to protect the people from quacks, and so our Commissioner of Health there employs an investigator who sends out nurses and investigates the cases reported. That is one of the few places in the state that I know of, the only place in the state where the health officer takes that position, that the people should, through its health department, go after these fakes of medicine, as a part of the scheme of health protection.

THE CHAIRMAN: Are you ready for the question that Dr. Kinsey made that we proceed to the organization of a State County Society organization, County Secretaries' organization? Are you ready for that question? (Question! Question!)

As many as are in favor of proceeding with the organization of such a society will signify by saying aye. (Aye). Opposed, by the same sign. The motion is carried. What is your pleasure?

Dr. Warnshuis: Mr. Chairman, I would recommend, or would like to suggest that at this meeting there be elected a president and a secretary of the County Secretaries' Association, and that they comprise a committee that will take up the plan and general scheme of organization and report either through the columns of the Journal or by correspondence with the Secretaries. Motion Seconded.

THE CHAIRMAN: If there are no objections, then we will proceed to the election of first a president of such an organization. Are there any nominations?

DR. SQUIER: I will nominate Dr. Kinsey as president.

THE CHAIRMAN: Dr. Kinsey is nominated as president. Are there other nominations?

Move you the nominations be closed. Seconded.

Moved and supported that nominations be closed. As many as are in favor signify by saying aye. (Aye.) Opposed, by the same sign. The motion is carried. Dr. Kinsey is the only nomination. How will you proceed with the election?

I move that Dr. Kinsey be unanimously elected presiden of the County Secretaries' Association. Support the motion.

Moved and seconded that Dr. Kinsey be unanimously elected as president of this new organization. As many as are in favor will signify by saying aye. (Aye.) Opposed, by the same sign. Dr. Kinsey, you are unanimously elected. I will turn the meeting over to you.

DR. KINSEY: Well, I think there is nothing else to be done except to proceed with the nomination for secretary.

DR. SQUIER: I would like to place in nomination the name of Dr. Curry.

Dr. Curry is nominated. Supported. Are there any other nominations?

Mr. President, I move that the nominations be closed and that Dr. Curry be declared elected. Support the motion.

Moved and supported that the nominations be closed and that Dr. Curry be declared elected. All in favor say aye. (Aye.) Contrary. Dr. Curry is elected.

Is there anything else to come before this meeting before we adjourn.

DR. WARNSHUIS: Mr. President, I would just like to remind the Secretaries of the meeting of the Academy—that is to take place this evening at 6 o'clock down stairs in the dining room off of the main dining room. Dr. Fishbein and Dr. Abt are both here and are going to be the speakers. The meeting will start promptly at 6. You are all very cordially invited to stay at this meeting.

THE CHAIRMAN: The meeting will stand adjourned.

The following County Secretaries were in attendance: Johnson, Ionia-Montcalm; Forsythe, Washtenaw-Livingston; Thiede, Monroe; Fenton, Hillsdale; Schultz, Branch; Dean, St. Joe; Hoebeke, Kalamazoo; Squier, Calhoun; Kinsey, Kent; Wershow, Ingham; Kudner, Jackson; Wolfson, Macomb; Stewart, Houghton; Curry, Genessee; Cady, Saginaw; Brush, St. Claire; Tappan, Ottawa.

The following officers were also in attendance: President, G. L. Connor, Chairman of the Council; J. B. Jackson, Secretary-Editor, F. C. Warnshuis, Councilors Darling, Walker, LeFevre, Green, Stone, Clancy, Ex-President Dodge, Secretary of Board of Registration, B. D. Harrison.

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JUNE, 1924

Report Malpractice Threats Immediately to Doctor F. B. Tibbals, 1212 Kresge Building, Detroit, Mich.

Editorials

PERTINENT REFLECTIONS

The thought for this editorial was suggested by the following item that appeared in several papers of this state:

"Lansing, May 2.—A state hospital in which poor and needy cases could be treated free or at an extremely moderate cost is needed in Michigan, Gov. Groesbeck said today. He thought such an institution should be located in Lansing. The comment grew out of reports reaching him to the effect that exorbitant and out-of-reach prices have been assessed against persons of small means in private and semi-charitable hospitals."

After reading the above we were told a few hours later of one incident wherein a head of a family of two, earning about $300 a month was charged by a doctor $250 for attending his wife during a normal confinement. This, in addition to a hospital bill and nurse service of $192, or, a total of $442 for doctor, hospital and nurse for a single normal confinement.

This is but one incident. During the year we have cited several more and scarcely a week passes but there comes to us from somewhere similar narations of excessive charges for medical services. These incidents are crystalizing public sentiment and arousing a demand for relief. As a profession we have raved about state medicine. As a profession we are bringing onto ourselves state medicine.

Our science has made rapid progress. The public gleans the power we possess to conserve and prolong their physical well-being. Knowing, they demand its benefits. The average lay individual cannot afford to purchase these benefits unless we correlate their costs with his ability to pay. His love for his offspring may cause him to incur a single sacrifice, the results of which will often bring him greater disaster than the occasion involves, and assume an obligation beyond his financial responsibility. He will not do so repeatedly at the cost of his independence. It is when we compel such repeated sacrifices that he will through his legislators demand that the state grant to him that which we make it impossible for him to secure. It is for us to make available to the average layman professional services that will protect his physical welfare.

Unless we do, we may confidently expect that state institutions manned by state employes, will be erected and operated with professional independence subservient to their dictation. It is high time that these pertinent reflections shall influence doctors when they render their monthly statements.

THE WRITING OF PAPERS: SUGGESTIONS TO AUTHORS

Anyone who has ever had anything to do with the editing of papers for medical journals is familiar with the conglomeration of the author's original copy. We could write a book on the subject, for each month we are compelled to spend hours upon hours correcting and preparing these manuscripts for the printer. Sentences fifteen lines long, total absence of punctuation, capitals where they do not belong, paragraphs two and three pages long, figures under fifty where they should be written out, abbreviations, quotations with no indication of its ending, several different sizes of paper, close spacing, needless repetition, etc.

We realize that when unfamiliar with printers' rules one cannot compose an errorless copy. We do not expect that and do not ask it. But we do respectfully request that you observe the following suggestions when sending in manuscripts for publication:

Send the original copy—not a carbon copy.

Keep a copy of the paper until you have received the proof.

Use white paper 8½ inches by 11 inches. Allow a margin of at least one inch on both side and at top and bottom. Never crowd the page with typewritten matter.

Type in double space throughout. This includes the reports of cases and biography.

The title of the paper should be in all caps in the center, about 2 inches from top of paper. Immediately underneath the title, type your name on one line, an underneath that, the town. At the end of the manuscript type your street address on the left hand side.

Superior figures in the body of your paper referring to biography must never be enclosed in parentheses. They should be typed thus—Osler 2.

Figures in the body of the manuscript on a line with the other reading matter that divide your comment into several sections may be enclosed in parentheses, thus—(1)—(2).

When making changes in the manuscript write corrections in the body between lines —not in the margin.

Changes in proof must be written.

Illustrations: Write your name, address and the number of the figure on back of illustration. Mark "top" when it is not clear which is the top or bottom. This applies especially to illustrations of microscopical specimens and when only a part of the body is illustrated.

Legends for illustrations should be typed on a separate sheet, the title of the paper, the name and address of the author at the top.

Never roll a manuscript for mailing. Fold it once or twice, or mail it flat. Illustrations should be protected and mailed flat.

MINUTES OF JOINT COMMITTEE ON PUBLIC HEALTH EDUCATION

Minutes of the Meeting of the Joint Committee on Public Health Education, Kalamazoo, April 16, 1924.

1. The Joint Committee on Health Education met with the Secretaries of the County Medical Societies of the State at Kalamazoo, noon, April 16, 1924. Members of the Joint Committee present, as follows:

Representatives of the State Medical Society: Doctors W. T. Dodge, J. B. Jackson, F. C. Warnshuis, B. D. Harison and A. P. Biddle.

University of Michigan: President M. L. Burton, Dean Hugh Cabot, Dr. G. Carl Huber and Professor W. D. Henderson.

Detroit College of Medicine and Surgery: Dean W. H. MacCracken.

Michigan Tuberculosis Association: Mr. Theo J. Werle.

Michigan State Nurses Association: Miss A. L. Lake.

2. Reading of the minutes of the last meeting of the Joint Committee held in Detroit, January 16, 1924.

3. Report of health lectures given to date. Professor Henderson, Secretary of the Joint Committee, reported the following assignment of health lectures, to date:

Lectures assigned throughout the State outside of Wayne County	178
Attendance, 103 reporting	15,760
Lectures given in Detroit and Wayne County	75
Attendance, 64 reporting	42,000
Total number of lectures assigned to date	253
Increase in number assigned to date over total for last year	48%
Total attendance to date, 167 reporting	57,760
Increase in total attendance over last year	160%

The health lectures given in Detroit and Wayne County were assigned under the joint auspices of the Wayne County Medical Society Committee on Public Education and the State Joint Committee. Most of the lectures assigned to Detroit were given under the auspices of high schools and commercial organizations of that city. The average attendance upon health lectures in Detroit to date, 650.

4. Report of new names for the forthcoming Health Education Bulletin. The names of 62 additional speakers, together with their subjects, were approved for announcement in the next number of Health Education Bulletin.

Dr. Huber suggested that the names of speakers and subjects submitted to the Secretary between April 16 and the time of publication of the new bulletin be submitted to the Executive Committee for approval.

5. The question of the payment of the traveling expenses of those members of the State Medical Society who make extended trips incident to the giving of health lectures was brought up for consideration. This matter was referred to Dr. Jackson, President of the Medical Council.

6. Dr. Cabot called the attention of the members present to the tentative lecture outline on Goitre prepared by Dr. Cowie of Ann Arbor, for the assistance of those members of the speaking staff of the Joint Committee who have volunteered to assist in the publicity campaign relative to Goitre in Michigan. On motion of Dr. Cabot, the Secretary was instructed to have an adequate number of copies of these lecture outlines printed for use throughout the State.

7. The advisability of preparing outlines

on other subjects, such as Tuberculosis and Cancer, similar to the outline prepared by Dr. Cowie on Goitre was discussed and approved. On motion of Dr. Huber the Chairman of the Joint Committee was to consider the preparation of lecture outlines on Tuberculosis, Cancer, and other subjects of similar importance.

8. Mr. Theo. J. Werle, representative of the State Tuberculosis Association, called attention to the need of his Association for such data as might be incorporated in an outline on Tuberculosis similar to Dr. Cowie's outline on Goitre. Mr. Werle stated that it would be possible for his Association to assist in the expense of printing such an outline. He also stated that in the case of health lectures given throughout the State on Tuberculosis, his Association would undoubtedly be able to assist in the matter of compensation for traveling expenses, provided adequate notice is given of such assignments.

9. Dr. Warnshuis called attention to the importance of the matter of publicity relative to our Health Education Program through the State press.

10. The next meeting of the Joint Committee will be held in Ann Arbor, Monday, October 6, noon, Eastern time.

11. Meeting adjourned.

W. D. Henderson, Secretary.

April 21, 1924.

IODIZED SALT

In our April issue we imparted in extensive detail the activities that comprised the efforts of the special committee of the Pediatric Section of our State Medical Society in bringing about the formula for iodized salt and the work that was done to interest the salt manufacturers to make and distribute Iodized Salt. In our May issue we published an editorial, written by Dr. Cowie, Chairman of this Special Committee, setting forth the additional work that had been performed by this Committee and also outlining plans for future activity and work in order that the public might become informed as to the menace of goitre and how Iodized Salt is an effective prophylactic agent.

We doubt whether all our members appreciate the scope and value of this splendid piece of work that has been done by this Committee that so ably represents our State Medical Society. We have further doubt as to the support that is being given to this Committee by our members throughout the state. Iodized Salt is on the market solely because of the efforts of Dr. Cowie and his fellow committee members. While others, now that the value of this work is becoming more and more apparent, are seeking to purloin the credit while at the same time they also are attempting to induce the manufacturers to remove from the packages the Committee's certification, it is an established fact that Iodized Salt was made possible solely and wholly because of the work that was done by the Committee from our Pediatric Section. Others may claim credit but such claims are unwarranted. Just at this time we are not concerned regarding that point. We are deeply interested, however, in urging our members to recommend Iodized salt to their patients. We are interested in inducing our members to carefully observe the results of its use. We are desirous that our members shall compile their observations and submit their reports to the Chairman of the Committee, Dr. Cowie. Dr. Cowie will gladly answer any inquiries and will supply any information that is in his possession.

It is urged that this assistance be given to the Committee so that in due time a complete report can be made to the people of Michigan. You, Doctor, are requested to contribute this assistance.

In order that every member may be fully familiar with all the details concerning Iodized Salt, and because information is at hand that indicates that in several localities doctors have failed to read the report in the April and May Journals, County Secretaries are requested to call the attention of their members to these two issues of the Journal in the notices of their county meetings that are sent out. County Secretaries are also requested to give a brief synopsis of the origin and value of Iodized Salt at the next meeting of their County Society. It is the Committee's desire that every member shall be in full possession of this information regarding Iodized Salt, and to that end does the Committee request this assistance from our County Secretaries.

CHICAGO MEETING—A. M. A.

The greatest medical organization in the world will hold its annual meeting in Chicago the week of June 9th. An attendance of 15,000 doctors is the estimate that has been made by national officers. Michigan should register a goodly percentage of this attendance figure. Doctors who do not attend the scientific sections of the A. M. A., miss an annual opportunity for post-graduate instruction no other country can give. A wonderful scientific program has been arranged. All the Sectional meetings are to be held on the Municipal Pier of Chicago, thereby obviating the annoyance of walking long distances from one meeting place to another in order to hear special subjects. A continuous, daily program of moving pic-

ture clinics will also be conducted. A daily diagnostic clinic will be conducted on the pier. At stated hours a Physical Examination Clinic will be held wherein attending doctors or members of their families may receive a physical examination at the hands of medical men who have been designated by the Chicago Medical Society and approved by the Executive Committee of the A. M. A. At the General Meetings those in attendance will be addressed by speakers of international reputation. Delightful entertainment programs have likewise been arranged. All in all this Chicago Meeting of the A. M. A. gives every promise of being the biggest and best national meeting ever held. You cannot afford to miss it.

We recommend that you write today, for your hotel reservations. Your four days attendance at this meeting is bound to inspire you and cause you to profit handsomely. It is not too late to arrange to attend. Michigan will be represented in the House of Delegates by Doctors Hornbogen, Brook, Frothingham and Nichols and by Doctors Shurly and Hirschman of the sections of Oto-Laryngology and Stomatology.

COMMITTEES FOR MICHIGAN STATE MEDICAL SOCIETY, MOUNT CLEMENS, SEPTEMBER 9-10-11, 1924

1. *Meeting Places*—E. G. Folsom, J. M. Croman, Jr., V. H. Wolfson.
2. *Hotels and Bath Houses*—J. M. Croman, Jr., V. H. Wolfson, E. G. Folsom.
3. *Entertainment*—R. Ullrich, W. Kane, A. A. Thompson, H. Wiley, T. P. Russell, G. F. Moore.
4. *Reception*—G. Perrson, F. K. Lenfestey, A. B. Allen, W. Norton, W. Kane, R. Ullrich.
5. *Ladies' Entertainment*—S. B. Montique, R. Turner, A. J. Warren, R. Greenshield, C. E. Greene, M. C. Cronin.
6. *Exhibits*—W. Norton, A. J. Warren, J. P. Letts, G. F. Moore, E. G. Miller, J. G. Curlett.
7. *Automobiles*—M. Smith, A. A. Thompson, J. G. Curlett, C. F. Mann, W. Kane, A. J. Warren.
8. *Finance*—J. M. Croman, Sr., A. B. Bower, M. C. Cronin, H. G. Berry, J. G. White, F. Scott.
9. *Decorations*—A. A. Thompson, M. Smith, T. P. Russell, L. Allen, W. Sharpe, J. Seaman.

OUR ADVERTISING POLICY

In conjunction with other state journals we have adopted the following advertising policy:

1. All medicinal preparations advertised must be accepted by the Council on Pharmacy and Chemistry for "New and Nonofficial Remedies."
2. No advertisement will be accepted which, either by intent or inference, might result in deceiving, defrauding or misleading the reader.
3. Extravagantly worded copy or sweeping superlative claims are subject either to revision or rejection.
4. Statements disparaging competitors' goods are not permissible.
5. Illustrations of a suggestive nature, or vulgarly worded copy, are subject to revision or rejection.
6. Statements indorsing any medicinal or dietetic product will not be published unless with the written permission of its author. No indorsement or quotation from the writings of a physician will be permitted in advertisements after his death.
7. In the advertisements of books, statements will not be permitted which claim that any book is superlative in its field.
8. Advertisements of books on sexual subjects and venereal diseases must conform with the requirements of good taste in display, head lines and in text matter.
9. In the advertising of books, quotations from book reviews or from individual physicians may be used, provided the written consent of physician to such use is presented.
10. No financial advertisement will be published in which extraordinary returns are promised, nor are such statements as "absolutely safe" permissible.
11. Advertising of infant foods must conform to established fact as represented by consensus of statements in well recognized textbooks and periodical articles on infant feeding.
12. No advertisement of infant foods will be accepted which reflects unfavorably on breast milk, or on properly modified cow's milk.
13. Advertisements of medical journals carrying announcements of proprietary medicines not approved by the Council on Pharmacy and Chemistry will not be accepted.
14. Commercial laboratories which are conducted in an ethical manner may be advertised.
15. Commercial laboratories must limit their services to laboratory diagnostic procedures, and must not engage in diagnosis and treatment of disease of patients coming directly to the laboratory. The provision of special facilities at the laboratory for the use of physicians in the administration of remedies, or for the withdrawal of specimens, is considered a violation of this clause.
16. Laboratories may state the names of the permanently employed personnel, including consultant staffs, provided such consultants actually function.
17. Advertisements will be accepted for products which are official in the United States Pharmacopeia or National Formulary if they are marked under the official name, and if no unestablished therapeutic claims are made for them.
18. General or institutional advertisements of pharmaceutical or biological firms will be accepted provided: (a) that the firm's business is not chiefly that of handling unaccepted proprietaries, or (b) the firm deals in the main with official preparations.
19. Advertisements of tooth paste, cosmetics and soaps shall be limited to claims as to composition, and well recognized fact. The interpretation as to specific virtues of the product dependent on composition must be substantiated by acceptable evidence.

Will you not aid us in maintaining these principles and cause our advertising revenue to increase by patronizing those advertisers who make this journal possible?

Editorial Comments

Our next annual meeting is to be held in Mount Clemens. The date is September 9, 10 and 11.

Just now we want to tell you about the general plan that has been determined on for this annual meeting.

On September 9th the House of Delegates will meet at 2:00 and 7:00 p. m. The Council will also meet that day and some of the Sections are planning Clinical Conferences.

On Sept. 10th the General Session will convene at 10:00 a. m. All the Sections will meet that

afternoon from 1:15 to 4:00 p. m. In the evening there will be a General Session at 7:30 p. m., at which time a noted speaker will discuss some medical economic problem. The President's Reception will be at 9:00 p. m.

On Sept. 11th all the Sections will meet from 9 to 12 a. m. In the afternoon there will be a general session of all the combined Sections and the speakers will be invited distinguished guests. Dr. Culver, Vanderberg and Sladen will be responsible for the program of this general scientific-clinical session.

New and Nonofficial Remedies, 1924, containing descriptions of articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1923. Cloth. Price, postpaid, $1.50. Pp. 422+XXXIX. Chicago: American Medical Association, 1924.

Every physician is continually bombarded with literature, scientific and otherwise, concerning the newer remedies. He has neither the time nor the opportunity to investigate all even of the more promising preparations, and obviously he cannot try them upon his patients without investigation He must know the composition of the article, must know that the claims under which it is marked are true; in other words, he must have some critical statement of the actions, uses and dosage as well as of the chemical and physical nature of the product.

This need of the physician is met in New and Nonofficial Remedies, which is the official publication through which the Council on Pharmacy and Chemistry annualy presents to the American medical profession disinterested, critical information about the proprietary preparations which the Council deems worthy of recognition. In addition to the description of these proprietary preparations, the book treats those non-official remedies which, in the opinion of the Council, are worthy of consideration.

As the book is designed for ready reference, each preparation is classified, and each classification is preceded by a general and critical discussion of that group. These articles are written by those who may speak with authority on the separate subjects, and are a compilation of the best accepted opinions of today. Thus there is a general article on lactic acid-producing organisms in which the newly accepted Bacillus acidophilus preparations are discussed in connection with other accepted sour or fermented milk preparations. The animal organ preparations, the biologic preparations, the arsenic preparations, and so on, are discussed in such a manner as to make the accepted facts concerning each group readily available.

A glance at the preface of the new volume will show that the book has been extremely revised. In fact, each new edition of New and Nonofficial Remedies is essentially a newly written book, fully indexed.

Physicians who wish to know why a given proprietary is not described in New and Nonofficial Remedies will find the References to Proprietary and Unofficial Articles not found in N. N. R. of much value. In this chapter (in the back of the book), there are references to published articles dealing with preparations which have not been accepted.

New and Nonofficial Remedies is a book that a physician who prescribes drugs cannot afford to be without. The book contains information about medical products which cannot be found in any other publication.

The book will be sent postpaid by the American Medical Association, 535 North Dearborn Street, Chicago, on receipt of one dollar and fifty cents.

We believe this is the same Mr. Rubin who was so keen for State Medicine and similar forms of medical services for the people.

Jacob H. Rubin, writing in the Nation's Business, says:

"For twenty-five years I studied Karl Marx and went up and down this land preaching communism.

"I preached that capitalism was wasteful, corrupt, unjust and destructive of the soul. Under communism, I found a system unbelievably more wasteful, inefficient and expensive.

"I preached that corruption and bribery were adjuncts of capitalistic governments and under communism all officials would work unselfishly for the glory of the state. Instead I found corruption and graft on a colossal scale.

"I preached against the artificial distinctions of wealth and birth and America's dollar aristocracy. In Soviet Russia I expected to find all social barriers broken down and every man a comrade. Instead, I found new barriers and a new aristocracy.

"Like many another honest reformer, I failed to take human nature into account."

Having read the above it might be well to reflect on the following and possibly consider the end that will be attained in the enthusiasm that is being exhibited by social and health workers.

Government ownership, the socialization of industry, and similar communistic theories of economics have been entirely discredited by the Bolshevik experiments in Russia, says Emma Goldman, deported anarchist and former leader of the extreme socialists in the United States, has gone to Germany, and from Berlin is writing an account of her experiences under the rule of Lenin and Trotsky.

"Two years of earnest study, investigation and research convinced me that the great benefits brought to the Russian people by Bolshevism exist only on paper, painted in glownig colors of the masses of Europe and America by efficient Bolshevik propaganda," declares Miss Goldman. "As advertising wizards the Bolshevik excel anything the world has ever known before. But in reality the Russian people have gained nothing from the Bolsheviki experiment. The Russian workers soon were placed under the industrial yoke of the Bolshevik state. Chattel slavery became the lot of the Russian proletariat. Try as I might, I could find nowhere any evidence of benefits received either by the workers or the peasants from the Bolshevik regime."

County Secretaries are requested to promptly comply with the request that is made in the editorial on Iodized Salt that is published on the editorial pages of this issue. County Secretaries are likewise requested to read the stenographers minutes of the Conference of County Secretaries that was held in Kalamazoo on April 16th.

The "Saturday Evening Post of Medical Journalism"—thus did President-Elect Pusey, of the A. M. A. characterize the Journal of the American Medical Association at a meeting of the Missouri State Medical Society. It is an inclusive description, still there are many who fail to avail themselves of this greatest medical journal that exists in this world. We oft-times wonder why our members forego its educational value. For the small annual fee of $5.00 a doctor can receive it weekly and at the same time become a Fellow of

the American Medical Association. Neglect and carelessness is the principle reason. Tell your office girl today to write for an application blank and instruct her to cause you to fill it out as soon as it is received. Your dividend upon that investment will be a thousand-fold.

September 9, 10 and 11 are the dates for our Annual Meeting in Mount Clemens. The July issue will contain more detailed information and ths August issue will impart the features of the program. Just now mark these dates on your calendar and keep them open.

The Annual Clinic Week of the Detroit College of Medicine and Surgery will be conducted during the week of June 16-20. A splendid program has been arranged, some very well known clinicians will conduct special clinics and the entertainment features will be pleasant. A cordial invitation to attend is extended to all our readers by the Committee on Arrangements.

Attention is directed to the Professional Announcements that appear in our advertising section. These announcements have been authorized by The Council and are for the convenience of our members in refering cases. It frequently happens that for one reason or another a patient is compelled to go to some other locality in the state and we are desirous of refering him for further care to a capable physician but are at loss to recall the name of the doctor or the field to which he limits his practice. Turning to these Professional Announcements the desired information is obtained. If you are not listed on these pages we will be glad to receive your order to insert your professional card.

From time to time we receive letters and newspaper clippings that tell of the activities of irregulars in engaging in the practice of medicine and surgery. Lately, from certain sections of the state, the surgical attempts of irregulars has been the subject of criticism. The query that is inevitably put is—What are the doctors and the state medical society doing about it? The answer is always very terse and consists of the one word—Nothing. The Medical Society and the medical profession is not and should not be the police power of the state. It is not incumbent upon the State Society to assume the role of prosecuting attorneys. The law that governs the practice of medicine is very clear in stating that violators of the law are to be prosecuted by the county prosecuting attorney, just the same as that official prosecutes violations of other state and county laws. If a law is being violated in your county it is the duty of the local prosecutor to bring action against the offender. If the medical law of Michigan is being violated in your county, it is a matter that should be handled by your local prosecutor. It is not the province of the State Society or any of its officers to make complaint. If your county has a prosecutor that winks at these violations and gives no heed to your request that he perform the duties of his office, then, we believe, that the next move is to elect a prosecutor who will uphold the provisions of the law in your county. The State Board of Registration in Medicine has neither the funds nor the agents to enforce the law and it is not charged by the act with its enforcement. Consequently it is a matter that concerns your prosecuting attorney and not one in which the State Medical Society should become the chief complainant.

Now that the bonus bill has been passed by Congress, those of us that did not attain a higher rank than Captain will collect another stipend. At this late date the rank of Lieutenant and Captain still has its advantages, though during the active days we felt very humble with these ratings.

We note in correspondence received that many of our golf enthusiasts are spelling "four" as "fore."

There is no doubt but what a lot of the charitable work that is being done is sentimental, and in spite of excellent intentions, does much harm. It has always seemed that the greatest harm was pauperization. Individuals who might gain their self-respect and independence and become self-supporting, for their own and everybody else's good, are so aided with gifts and free services that they become addicted to charity and rarely make the effort to care for themselves. Upon the least little provocation they boldly apply for aid, and charity agencies, seemingly striving for numerical records of assistance given, pass out the dole or aid with little, if any thought, as to the future of the applicant. It is the big, black blot that besmirches so many of our welfare agencies and charity organizations today. The prevention of dependence, and not its encouragement, should be the primary object of all those who are engaged in charity and social work. The relieving of want should be of secondary importance. There are too many pauperizing influences in the field. There is great need for reconstructive agencies that will lead the charity-seeking individual back to a station in life wherein his independence becomes re-established. There is also need for legalizing the choking of some of our hosts of up-lift workers. The same may also be said to apply to some of our public health propagandists.

Correspondence

THE SAMUEL D. GROSS PRIZE—FIFTEEN HUNDRED DOLLARS

Essays Will Be Received in Competition For the Prize Until January 1, 1925

The conditions annexed by the testator are that the prize "shall be awarded every five years to the writer of the best original essay, not exceeding one hundred and fifty printed pages, octavo, in length, illustrative of some subject in Surgical Pathology or Surgical Practice, founded upon original investigations, the candidates for the prize to be American citizens."

It is expressly stipulated that the competitor who receives the prize shall publish his essay in book form, and that he shall deposit one copy of the work in the Samuel D. Gross Library of the Philadelphia Academy of Surgery, and that on the title page it shall be stated that to the essay was awarded the Samuel D. Gross Prize of the Philadelphia Academy of Surgery.

The essays, which must be written by a single author in the English language, should be sent to the "Trustees of the Samuel D. Gross Prize of the Philadelphia Academy of Surgery, care of the College of Physicians, 19 S. 22d St., Philadelphia," on or before January 1, 1925.

Each essay must be typewritten, distinguished by a motto, and accompanied by a sealed envelope bearing the same motto, containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

The Committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year.

The committee reserves the right to make no award

if the essays submitted are not considered worthy of the prize.

William J. Taylor, M. D.,
John H. Jopson, M. D.,
Edward B. Hodge, M. D.,
Philadelphia, March 15, 1924. Trustees.

WAR DEPARTMENT—OFFICE OF THE SURGEON GENERAL, WASHINGTON

The Surgeon General desires that the attention of your Society be invited to the need which still exists in developing a reserve adequate to provide medical service under the Six Field Army Plan.

It is, of course, understood that members of the medical profession will respond promptly to the call of the country should a national emergency develop which will require their services. As the Surgeon General has endeavored to convey to the medical profession, enrollment in time of peace makes possible orderly organization of the Reserve Corps, which assures harmony to the personnel and efficiency to the organization.

If you find it consistent and convenient to do so, will you urge upon the members of the constituents of your Society their prompt enrollment in the Reserve Corps? Should you desire further information in this matter, it will be our pleasure to provide it. It is possible that you may consider it more convenient to have at your disposal application blanks for the Reserve Corps which it will also be our pleasure to provide if you indicate a desire for them.

Among some of the members of the profession, now officers of the Reserve Corps, there appears to be a misunderstanding of the promotion policy of the war department. This policy, a copy of which was sent you, states that members of the Reserve Corps are eligible for promotion to the next higher grade after each five-year period. It is possible that members of the Reserve Corps interpret this as granting them automatic promotion. This is not the fact. The promotion will be granted by an application initiated by the Reserve officer indicating his desire for promotion to the next higher grade. These applications for promotion should be submitted to the commanding general of the Corps Area in which the officer resides at least sixty (60) days prior to the expiration of his present appointment.

The Surgeon General directs that I express to the members of your committee and through you to the membership of your Society, his appreciation of the interest and support which they are giving the medical program for the National Defense.

Very truly yours, G. I. Jones,
Major, Medical Corps.

To the Editor of The Journal of the Michigan State Medical Society,
Grand Rapids, Mich.

Will you kindly publish in your Journal the following information concerning examinations by the National Board of Medical Examiners:

Part I., June 19th, 20th, 21st, 1924.
Part II., June 20th, 21st, 1924.

All applications for these examinations must be made on or before May 15th, 1924.

Further information may be obtained from the Secretary, Dr. J. S. Rodman, 1310 Medical Arts Building, Philadelphia, Pa.

Very truly yours,
J. S. Rodman, Secretary.

Preliminary announcement of a prize essay competition on the vitally important subject, "The Interrelationships of Hospital and Community," is made by The Modern Hospital Publishing Co., Inc., in the June issue of The Modern Hospital and The Nation's Health.

Three cash prizes of $350, $150 and $100 will be awarded, and there will be such honorable mentions as may be authorized by the Committee of Awards.

The purpose of this competition is to concentrate the thought of hospital, public health, medical and social welfare workers on this timely subject for the purpose of crystallizing opinions and defining future objectives.

The general program for the competition may be obtained on and after June 1, from The Modern Hospital Publishing Co., Inc., 22 East Ontario Street, Chicago, Ill.

The Modern Hospital Publishing Co., Inc.

Editor of the Journal of the Michigan State Medical Society:

Provision has been made for the training of officers of the Army Medical Department Reserve, assigned to the Branch Assignment Group. Camps of instruction will be conducted at: Carlisle Barracks, Pa., for the First, Second, Third, Fourth and Fifth Corps Areas; Fort Snelling, Minn., for the Sixth and Seventh Corps Areas; camp not yet selected in the Eighth and Ninth Corps Areas.

It is planned to give officers of the Medical Reserve Corps who can accept training at these camps during the period, instruction in tactics and the technic of operation of divisional medical units. It is hoped it may be possible to stimulate interest among officers of the Reserve Corps in the Branch Assignment Group, and to make these camps an agency in improving the efficiency of officers classified for duty with units in the Branch Assignment Group. These camps will be for a period of two weeks, beginning about July 7. Officers interested should apply to the Surgeon General of the Army direct, indicating their desire to be ordered to active duty for a period of two weeks, for the purpose of training. In their applications, they should state that they have not been on active duty for training during the present fiscal year. Officers ordered to active duty for training receive mileage to and from camp and the pay and allowances of their grade.

It is requested that this matter be given such publicity as your Society is in a position to give it.

Very truly yours,
G. I. Jones,
Major, Medical Corps.

Dr. Guy L. Connor, President,
Michigan State Medical Society,
Storh Building,
Detroit, Michigan.

Dear Doctor Connor:

Under the auspices of the Bureau of Legal Medicine and Legislation, a legislative conference of our State Medical Associations will be held in Chicago, Wednesday afternoon, June 11, at 2 o'clock, in the offices of the American Medical Association. You are requested to have present such delegates as you deem proper. Probably members of your state legislative committee will be preferred in appointing delegates, but this is a matter resting in your own descretion. Associations having counsel continuously employed are urged, however, to include such counsel among their delegates, if practicable.

This conference is called to enable our state associations to discuss freely among themselves the outstanding legal and legislative problems that confront the medical profession. It should contribute materially toward determining the future

policies and activities of the Bureau. In order that such policies and activities may be such as will best serve the largest number of state associations it is necessary that every such association be represented.

Please let me know at your earliest convenience the names of the delegates who will represent your association.

Yours truly,
Wm. C. Woodward
Executive Secretary, Bureau of Legal Medicine and Legislation.

Editor of the Journal of the Michigan State Medical Society:

I am enclosing herewith an article on the organization of a Medical Intelligence Bureau, which has been established at Hot Springs, Arkansas, under the auspices of the local Medical Society, for the purpose of presenting to the medical profession of the country more definite information regarding the uses and efforts of these waters in the treatment of diseases.

No doubt, you are aware of the fact that these springs were taken over by the United States in 1832 and set aside as a Natural Sanitorium for the people of America for all time. In 1883, the United States Government constructed the Army & Navy General Hospital here, and a few years later the Public Free Bath House.

I have visited Hot Springs from time to time since 1895 and each year since 1921, and have been very much impressed with the treatment of chronic rheumatism, sciatica, arthritis, and allied conditions. In presenting this information to the physicians of America, in an ethical and professional manner, I believe I can be of great service to a large army of sufferers from chronic diseases, that has resisted the usual treatment at home, and which would be greatly benefited by a course of treatment at these springs.

I therefore feel that the organization of this bureau would prove of interest to your readers and trust that you can find space for it in an early issue. I would thank you also for a marked copy.

Very fraternally yours,
L. M. Maus,
Intelligence Officer.

Editor of the Journal of the Michigan State Medical Society:

Mr. Theo J. Werle, Secretary of the Michigan Tuberculosis Association recently submitted to the Michigan State Medical Society, a plan to promote annual physical examinations among the lay people. The plan seemed so acceptable to President Guy L. Connor that he has appointed the following committee to represent our Society and to develop plans for this campaign:

Dr. W. H. Marshall, Flint, Chairman; Dr. H. M. Rich, Detroit; Dr. B. A. Shepard, Kalamazoo; Dr. B. R. Corbus, Grand Rapids; Dr. A. Harvey Miller, Gladstone.

It is the desire of Dr. Connor that this committee meet promptly to discuss how we can best serve the interests of the medical men and the public in the promotion of these annual examinations. A meeting will therefore be held at the Downey House, Lansing, on Thursday, May 15th. We can meet at noon, have luncheon, and informally talk over this matter.

Hoping that you can arrange to be present, I am

Fraternally yours,
W. H. Marshall.

State News Notes

COLLECTIONS

Physicians' Bills and Hospital Accounts collected anywhere in Michigan. H. C. VanAken, Lawyer, 309 Post Building, Battle Creek, Michigan. Reference any Bank in Battle Creek.

Owing to illness in physician's family one of the finest general practices in Detroit will be sold. Cash income exceeds $20,000 yearly. Location ideal. Equipment and furnishings the best. Competition negligible. Sale price at equipment invoice is $5,000. Included are all home furnishings in situ., valuable appointments and a thorough introduction. Packard coupe optional. Lady office assistant knows entire clientele and will remain if desired.

Fees are excellent. No night calls and no confinements except at hospital. Surgical field unlimited. Ideal place for country physician of personality and ability who wants a wider field.

This is a real opportunity. No answer desired unless you are a successful physician, can come and investigate and have the money.

Possession given anytime between May 1st and July 1st. C/O Journal.

NURSES' private home, invites convalescents and invalids; best of care, fine location. R. Rs. N. Y. C. and Interurban; best of references given. For particulars write Bessie Bileth, 566 Ely Street, Allegan, Mich.

WANTED—A general practitioner for an excellent location in southern Michigan, city of 15,000 population. Excellent schools. An Episcopalian or Catholic preferred. Reply c/o The Editor.

OFFICE EQUIPMENT, furniture, practice, and goodwill of James H. Boulter, M. D., 1601-7 David Whitney Bldg., Detroit, Mich.

Dr. Richard M. McKean left for Europe about the fifteenth of May. He will spend the next months mostly in England and France.

The annual alumni clinic of the Detroit College of Medicine and Surgery will be held June 16 to 20 inclusive. It is expected that on the respective days the following men will be present to give clinics or addresses: Dr. John O. Polak of Brooklyn, N. Y., to give a clinic in Gynecology; Dr. Willard Bartlett of St. Louis, to give an address on "Surgery of the Thyroid;" Dr. Gustave Kolischer of Chicago, whose subject will cover the Genito-Urinary field; Dr. W. C. Stoner of Cleveland, who will conduct a heart clinic, and Dr. Joseph C. Doane, Medical Director of the Philadelphia General Hospital, who will give a chest clinic. These clinics and addresses will be given at Detroit Receiving Hospital, Harper, Providence, Grace, St. Mary's and Deaconess Hospitals.

Recently Doctors Guy Connor and B. D. Harrison of Detroit, were guests at a meeting of physicians at Muskegon at the Century Club.

The -4 and -9 classes from 1879 to 1924 of the Detroit College of Medicine and Surgery will hold their respective reunions on Tuesday, June 16th.

Dr. A. M. Campbell, Grand Rapids, attended the meeting of the American Gynecological Society at White Sulphur Springs.

Dr. Harold Wilson is spending some time at present in Europe.

The annual commencement exercises of the Detroit College of Medicine and Surgery will be held Thursday evening, June 19, 1924. The graduates in this class include altogether, men who have completed their fifth year as internes in some acceptable hospital, one man returning from Tacoma, Wash., and another from San Francisco, for commencement.

Dr. C. H. Judd entertained about fifteen doctors in his home on Tuesday evening, May 6, 1924.

Dr. R. R. Smith, Grand Rapids, returned May 10th from a three months' tour of New Zealand and Australia.

The American Golf Association tournament will be held on Olympic Fields, Chicago, on Monday, June 9th.

Just as we go to press we learn of the death of Dr. D. LeFerte of Detroit.

In testimony to his twenty-five years of service, a banquet will be given in honor of Dr. George H. Simmons, editor and general manager of the American Medical Association, by members, on June 9th.

Do you miss the news items? We cannot print them if you fail to send them for publication.

Examinations for state registration will be conducted by the board at Ann Arbor on June 10, 11 and 12, and at Detroit on June 16, 17 and 18. For further details write Dr. B. D. Harison, Secretary, Stroh Building, Detroit.

On Monday night, June 9th, the American Radium Society, of which Dr. J. T. Case of Battle Creek, is president, will hold its annual banquet at the Drake Hotel, Chicago. Professor Regaud of Paris, Dr. Howard A. Kelly and Dr. James Ewing will be the speakers. Reservations may be placed with Dr. Henry Schmitz, 25 E. Washington Street, Chicago.

President Connor has appointed Doctors Angus McLean, J. D. Brook and A. W. Hornbogen to represent our society at the legislative conference to be held in Chicago on June 11th under the auspices of the A. M. A.

Doctors Wile, Petersen, Eggleston, Hickey and Crane will participate in the scientific program of the A. M. A. by reading papers.

The societies composing our Fifth Councillor District held a scientific and social meeting in Grand Rapids on May 26th. Dr. J. T. Finney of Johns Hopkins' was the principal essayist. The arrangements were made and presided over by Dr. B. R. Corbus, Councillor of the District.

Dr. Hugh Cabot was summoned to France on account of the serious illness of his daughter.

Dr. A. W. Hornbogen, Marquette, attended the Republican State Convention, held in Grand Rapids, May 7th.

New York State Medical Society, at is annual meeting, held in May, increased its state dues to $10 per member.

Deaths

The death of Dr. Daniel LaFerte of Detroit has been reported. The doctor was born in 1849, and was a graduate of Jefferson Medical College of Philadelphia in 1871. Besides the Michigan State Medical Society, he was a member of the American College of Surgeons and the Detroit Surgical Society. He was professor of Orthopedic Surgery at the Detroit College of Medicine and Surgery.

The death of Dr. Joseph Vandeventer of Leesburg, Virginia, formerly of Ispheming, Michigan, has been reported.

The death of Dr. Francis F. Shilling of Nashville has been reported. Dr. Shilling was born in 1862 and was a graduate of the University of Michigan in the class of 1901.

The death of Dr. H. W. Whitmore of Quincy has been reported. The doctor was born in 1857 and graduated from the Chicago College of Medicine & Surgery in 1881.

Dr. B. B. Godfrey of Holland was born in 1848. He was a graduate of Rush Medical College in 1878.

The death of Doctor C. F. Smith of Muskegon has been reported. He was born in 1873 and was a graduate of Baltimore Medical College.

County Society News

HOUGHTON COUNTY

The Houghton County Medical Society held its regular monthly meeting at the Houghton County Tuberculosis Sanitarium, Tuesday, May 6th, with 26 members present. A very sumptuous dinner was served at seven o'clock by Mr. and Mrs. Myers, after which a tour of inspection of the building was made by the doctors present. The following program was then carried out after a short business session.

"History of Our Sanitarium," by Dr. J. E. Scallon. Dr. Scallon went very thoroughly into the founding and appropriations for the building of the present sanitarium. The committee of supervisors, members of the Anti-Tuberculosis Society and of the Medical Society met on April 10, 1909. Ten thousand dollars was then appropriated by the supervisors to build the sanitarium. The sanitarium was either the first or second erected in the state. Dr. Scallon has been connected with the sanitarium more or less since its foundation in 1912.

The next paper was "Fundamentals in the Prevention of the Disease," by Dr. A. F. Fisher. This paper covered the field of preventive medicine and urged the establishment of Preventorium Clinics. The loss in money to our different industries due to sickness is one billion dollars a year. The death rate in the United States in 1923 was the ratio of ninety to a hundred thousand. Framingham, Mass., under Dr. Armstrong has reduced this to forty per one hundred thousand from one year following the methods of preventive medicine.

The third paper was "Laboratory Diagnosis," by Miss Ora Mills, technician of the Houghton laboratory. This paper dealt with the laboratory methods of diagnosis of tuberculosis, the various stains that are used, the technique use of sputum examination, and various animal tests. This was a very interesting and comprehensive paper.

Dr. LaBine next presented six cases of moderately and far advanced tuberculosis who are patients in the sanitarium. He demonstrated the methods of examination and presence of foci of

infection. These cases were all discussed by those present. A very full discussion of all of the above papers was then indulged in by all present. Dr. LaBine urged that all physicians of the different districts co-operate in sending their cases to the sanitarium, and assured them that they could send their private cases there and attend them individually.

On the motion of Dr. Gregg, seconded by Dr. LaBine, it was voted to refer Dr. Fischer's paper to the Committee on Publication of the Medical Society and give the same to the press. On motion by Dr. LaBine, seconded by Dr. Gregg, it was voted to have a banquet in place of our next meeting for Dr. J. E. Scallon, who celebrates his fiftieth year in the practice of medicine next week. The meeting then adjourned, all voting Mr. and Mrs. Meyers a kindly vote of thanks for their hospitality and entertainment.

Yours very truly,

G. C. Stewart, M. D., Secretary.

IONIA-MONTCALM COUNTY

The Ionia-Montcalm Medical Society met Friday evening, April 17th, 1924, at the Hotel Bailey, Ionia, Michigan, with sixteen members present.

Dinner was served at 7 o'clock after which the following program was presented.

Subject: "Meddlesome Midwifery and Other Obstetrical Problems."

Speaker: Dr. Alexander Campbell, Grand Rapids, Michigan. He spoke of Obstetrics as a community obligation and condemned the wave of Meddlesome Midwifery. A plea was made for more conservative obstetrics and to keep the welfare and safety of the infant in the foreground. Also conservatism in the use of pituitary gland preparations, forceps and ceasarian section, without definite indication for their use.

The subject of Eclampsia and its treatment was presented in a very thorough manner. A very fine discussion by all the members present emphasized the interest stimulated by the address.

Subject: "The Medical Aspect of Certain Colon Bacillus Infections."

Speaker: Dr. Merrill Wells, Grand Rapids, Michigan. Dr. Wells presented the subject in his usual masterly manner covering in detail the etiology, pathology and treatment. The paper was discussed by many members present.

Dr. I. S. Lillie was unanimously elected to membership.

Meeting adjourned until second Thursday in May.

F. A. Johnson, Secretary.

NEWAYGO COUNTY

On April 22, 1924, the regular monthly meeting of the Newaygo County Medical Society met at the Valley Inn at 6:30 p. m., in the village of Newaygo, Michigan.

After dinner was served, the meeting was called to order by the President, Dr. Brady of Newaygo.

The minutes of the last annual meeting were read and approved, and a motion was made by Dr. Long and supported by Dr. W. Geerling that the Secretary request the publication of the minutes of our Society as reported. The motion was carried.

Moved, by Dr. Mateer and seconded by Dr. Long, that the unanimous support of the Society be given to the Prosecuting Attorney, in proceeding against all chiropractors in Newaygo County. Motion was carried.

A motion was made by Dr. Mateer and supported by Dr. Branch that a standing committee of three be appointed for the year, to confer with the Board of Supervisors concerning medical attendance, health officers duties, and uniform fees, in the county. The motion was carried and the President appointed Dr. N. DeHaas and Dr. C. A. Mater and Dr. J. C. Branch.

The Society then listened to two papers by the President D. Brady: "Primary Acute Nephritis in Infancy and Young Children," and "Diphtheria."

Discussion by Drs. Black, Long, W. Geerling and Mateer.

There being no further business the meeting adjourned to meet again May 20, 1924, at Fremont, Mich.

W. H. Barnum, Secretary.

GRATIOT-ISABELLA-CLARE COUNTY

The April meeting of the G. I. C. was held in the Alma Chamber of Commerce. Supper was served cafeteria style to 23.

Dr. Frederick A. Coller of the Surgical Staff of the University Hospital talked on "Diseases of the Gall Bladder," and used lantern slides to illustrate his subject.

The talk was good, the pictures were instructive, the supper was congenial and filling altogether a very profitable meeting.

E. M. Highfield, Secretary.

Book Reviews

PRACTICAL CHEMICAL ANALYSIS OF THE BLOOD, by V. C. Myers, Dept. Bio. Chemistry—N. Y. Post graduate school. Second edition, revised, cloth. Price $4.50. C. V. Mosby Co., St. Louis, Mo.

A book that will serve as a valued aid to the physician and laboratory worker in securing desired information from their blood analyses.

DIFFERENTIAL DIAGNOSIS—Presented through an analysis of 317 cases By Richard C. Cabot, M. D., Professor of Medicine and Professor of Social Ethics at Harvard University. Volume 2—Third Edition, revivsed. Octavo of 709 pages, 254 illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, $9.00 net.

An excellent, up-to-date edition of this text that is of such vast value in perfecting our diagnostic ability.

ABT'S PEDIATRICS (Volume III)—By 150 Specialists. Edited by Isaac A. Abt, M. D., Professor of Diseases of Children, Northwestern University Medical School, Chicago. Eight octavo volumes, 8,000 pages, 1,500 illustrations, separate index volume free. Volume III contains 1,051 pages with 223 illustrations. 1924, cloth, $10.00 per volume. W. B. Saunders Company, Philadelphia and London.

This third volume justifies what was said of the first two and gives further promise that this system will be the standard authority for profession.

APPLIED PATHOLOGY OF NOSE, THROAT AND EAR—By Joseph C. Beck, M. D., F. A. C. S., Chicago. Cloth, $7.50. C. V. Mosby Co., St. Louis, Mo.

A well illustrated text, limited to pathology and exclusive of surgical interventions. A text that will, as we so badly need, induce consideration of pathology and pathological needs and processes before consideration is given to surgery.

CIRCULATORY DISTURBANCES OF THE EXTREMITIES, including Gangrene, Vasomotor and Trophic Disorders, by Leo Buerger, M. A., M. D., New York City. Cloth, $8.50. W. B. Saunders Company, Philadelphia and London.

A splendid text covering the domain of circulatory,

vaso-motor and trophic disturbances of the extremities. Well illustrated, exact in description, based on known pathology and void of nebulous theories, it is a valued contribution.

CANCER: NATURE, DIAGNOSIS AND CURE—By Francis Carter Wood, M. D.; Director Institute for Cancer Research, Columbia University. Funk & Wagnalls, New York.

MAN AND THE MICROBE: HOW COMMUNICABLE DISEASES ARE CONTROLLED—By C. E. A. Winslow, Dr. P. H.; Professor of Public Health, Yale School of Medicine. Funk & Wagnalls, New York.

COMMUNITY HEALTH: HOW TO OBTAIN AND PRESERVE IT—By D. B. Armstrong, M. D.; Sc. D.; Executive Officer of the National Health Council. Funk & Wagnalls Company, New York.

THE BABY'S HEALTH—By Richard A. Bolt, M. D., Gr. P. H.; Director Medical Service, American Child Health Association. Funk & Wagnalls, New York.

PERSONAL HYGIENE: THE RULES FOR RIGHT LIVING—By Allan J. McLaughlin, M. D.; Surgeon United States Public Health Servvice. Funk & Wagnalls, New York.

These comprise the initial unit of five volumes of the 20-volume National Health Series, edited by the National Health Council, written by the leading health authorities of the country, and published by the Funk & Wagnalls Company. The other 15 volumes will be published in units of five titles, the series to be completed by May 1, 1924.

Each of the five present volumes covers a subject of vital importance to the general public. To our knowledge, no books of a similar nature have ever appeared that have made the nature of the diseases, their prevention, and their cure so clear to the layman.

Every seeker for health, either for himself or for others, will be able to secure authoritative information in the National Health Series which he may follow in fullest confidence. The language is non-technical and easily understood. The volumes are compactly written, though at no sacrifice to clearness—a point of great desirability to the average person who does not care to take the time and trouble to read perhaps hundreds of pages of non-essential details, or who will not bother trying to understand technical treatises.

MANAGEMENT OF DIABETES—By George A. Harrop, M. D., Presbyterian Hospital, New York. Cloth, 190 pages, price $2.00. Paul B. Hoeber, Inc., 67 E. 59th St., New York.

This book is intended to be a manual for physicians and nurses, on the management of this disease by means of dietary regulation (which still remains the foundation of all diabetic therapy) together with the use of insulin. It is the outgrowth of experience gained in giving a course of instruction to 600 physicians and about 50 nurses at the Presbyterian Hospital in the summer of 1923, under the auspices of the College of Physicians and Surgeons, and was made possible by a grant of money from Mr. John D. Rockefeller, Jr.

The use of insulin in the treatment of diabetes was begun at Presbyterian Hospital (the first to use it in New York) in August, 1922, and practically all of the cases treated up to the present time have been observed and followed by the author.

An easily followed outline of every procedure has been given, with practical hints on just the points concerning which the physicians taking the course have asked fuller help.

The food tables represent a distinct advance in general practical utility and simplicity.

Each food is set down as to its content of fat, carbohydrate and protein in five and ten gram multiples up to one hundred grams, together with the weight or size of the average serving, so that the actual amount of calculation is greatly lightened. Group figures are used for fruits, vegetables and meats.

ANNUAL REPRINT OF TH EREOPRTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1923—Cloth. Price, postpaid, $1.00. Pp. 72. Chicago: American Medical Association, 1923.

This volume contains the unabridged Council reports that have been adopted and authorized for publication during 1923. Some of the reports, due to their technicality, have only been abstracted in THE JOURNAL; others have been published in entirety, and still others have never been published elsewhere.

In this volume the Council sets forth the reasons that certain proprietary remedies were found unacceptable for New and Nonofficial Remedies, the reason why it has been deemed wise to omit certain hitherto accepted articles from the present 1924 edition, of New and Nonofficial Remedies, and the volume also contains certain preliminary reports on products that have therapeutic promise, but are as yet in the experimental stage. There is a long report on the widely advertised Fleischmann's Yeast, which was not found acceptable. Benetol, another article that has had much mention in the daily press, receives attention. There are reports on apiol and mercurial oil, which have been omitted from New and Nonofficial Remedies. In addition to these types, there are preliminary reports on bismuth in the treatment of syphilis, ethylene as an anesthetic, peptone in the treatment of migraine, and tryparsamid; and there are reports of such general interest as that on intravenous therapy and that on progress and conservatism in therapeutics.

For one who wishes to be cognizant not only of what the Council has done, but why it has done it, the book will be very valuable, for it supplements New and Nonofficial Remedies with a more detailed account of the activities of the Council during 1923. New and Nonofficial Remedies records those proprietary remedies which have been accepted; Council Reports treats those which have been found unacceptable, and those which give promise of becoming valuable.

THE GALL-BLADDER

In the *past* of the gall-bladder Dr. Sweet has reviewed its embroyology, pointing out as the striking developmental fact that the gall-bladder arises as an independent unit from the same group of ancestral cells as give rise to the stomach, duodenum, pancreas and liver.

Under the *present* of the gall-bladder, the author reviews the gross and microscopical anatomy of the gall-bladder, emphasizing particularly the unusual blood and lymph-supplies of the organ and the existence of two valve-like structures at the outlet of the gall-bladder. The writer also calls special attention to the existence along the bile-ducts of out-pouchings of the mucosa, which seem to possess the functional possibilities of accessory gall-bladders.

In the *future* of the gall-bladder, is discussed the possible functions of the organ. Experiments upon the relation of the gall-bladder to the cholesterol of the blood are cited.

Sweet concludes that the gall-bladder is an organ for absorption and that this function is in some way connected with the problem of cholesterol absorption. His view of the function of the gall-bladder is expressed in the sentence, "whatever passes into the gall-bladder through the cystic duct never passes out again through the cystic duct."

THE VALUE OF SODIUM CHLORID IN THE TREATMENT OF DUODENAL INTOXICATION

Claude F. Dixon, Rochester, Minn. (Journal A. M. A., May 10, 1924), presents six cases of duodenal intoxication. Chemical examination of the blood, in cases of duodenal intoxication, gastric or obstruction of the upper intestinal tract reveals (1) marked decrease in the plasma chlorids; (2) increase in the carbon dioxide carrying capacity of the blood, and (3) increase in the blood urea. The role played by plasma chlorids in this toxemia fluctuation is most striking and is such a constant finding that it is used as an index in the treatment of such cases. The action of the chlorid metabolism in this condition is debated; whether a toxic protein substance forms in the intestine which unites with the chlorids and causes chlorid depletion or whether the entire loss is due to vomiting remains unsettled. Patients suffering from intestinal occlusion, resulting in duodenal toxemia, are obviously in much better condition to undergo operation if preliminary treatment with chlorids is instituted. Postoperative vomiting, which often follows gastro-enterostomy, is diminished or abated by the administration of sodium chlorid. Patients with functional stasis and vomiting, if there is no obstruction, improve remarkably or recover following this treatment. Brown, Eusterman, Hartman and Rowntree used calcium chlorid and dilute hydrochloric acid and large amounts of fluids in the form of physiologic sodium chlorid solution intravenously, subcutaneously and by rectum, and Ringer's solution was also utilized in the treatment of duodenal intoxication. Hydrochloric acid probably serves the same purpose as sodium chlorid in this cnodition, but must be given in a very dilute form; in instances in which there is complete intestinal occlusion, its administration is not easy. Calcium chlorid also seems quite efficient, but large amounts of chlorid are often needed. Calcium chlorid cannot be administered subcutaneously because of the extensive necrosis that results. Caution must be used in its intravenous administration for the same reason. Sodium chlorid may be given in large quantities, subcutaneously, intravenously, by a duodenal tube or by proctoclysis. It may also be administered in the form of tablets covered with phenyl salicylate in cases of duodenal toxemia in which the obstruction is below the plyorus, and in functional cases in which there is stasis without obstruction. There is therefore little or no doubt that sodium chlorid seems to be the chlorid of choice in the treatment of duodenal intoxication. The mortality in the untreated cases, compared with that of the treated cases, is conclusive evidence that, when operation is necessary to relieve the mechanical abnormality, preoperative treatment lowers the risk to a minimum. The treatment also decreases or abolishes the similar toxemia often seen in patients with functional stasis without mechanical obstruction.

PRODUCTION OF ACIDOPHILUS MILK ON A LARGE SCALE FOR GENERAL USE

Acidophilus milk is a pleasant, nutritious food beverage, equal and, in fact, superior to almost all other forms of "buttermilk." A glassful or more with one or more of the daily meals is the ideal way for it to be taken. For this purpose, it should be available at moderate cost and obtainable without special effort. It should be produced and supplied by the dairy in the same way that other forms of milk are supplied. Investigation has shown that it is possible, and C. C. Bass, New Orleans (Journal A. M. A., May 10, 1924), describes a practical method of production that meets the need. The method differs from the methods of producing acidophilus milk previously used chiefly in that the milk is sterilized by interval heating at a temperature considerably lower than it is sterilized in the autoclave, and the machinery and facilities that are already available in any well equipped dairy are used. It is believed that this method will take the place of the method of production formerly used, which has proved quite burdensome on the bacteriologic laboratories of physicians an dothers. Sterilizing milk by superheating it in the autoclave impairs the taste and probably lessens its nutritive value. What is probably still more important, it is quite likely that such autoclave milk may itself impair the digestion and health when it is consumed in large quantities over long periods of time. It is all right for therapeutic purposes, for relatively short periods of time; but, for the purpose of maintaining an acidophilus flora for prevention, it would be kept up indefinitely. When made and supplied by dairies according to the method described. Bass says acidophilus milk should not cost any more than other kinds of "buttermilk." In fact, acidophilus milk of high quality, made by this method, is now delivered to the hospitals and to the homes of consumers in New Orleans for 13 cents a quart, and in Atlanta for 15 cents.

SIMPLICITY OF TECHNIC

George De Tarnowsky, Chicago (Journal A. M. A., May 10, 1924), pleads that operating-room ceremonial is in need of readjustment. Nurses and interns—and some surgeons—are obsessed with the belief that the preparation of the field operation, carried out with a ritual that makes a Greek church high mass simple by comparison, will in some mysterious way prevent postoperative shock and intestinal paresis. In the observance of this ritual there is an enormous wastage of towels, sheets, suture material and solutions. Gentleness in handling tissues is an art that needs more emphasis than it is, at present, given in our teaching and writing. Preparative starvation, purging and frightening are potent factors in the causation of postoperative shock, intetsinal paresis and protracted convalescence. The simplest surgical technic, based on accurate anatomic knowledge of the issues involved, will give the best results.

A SIMPLE METHOD OF PRESCRIBING DIACETIC DIETS

George Baehr, Herman Lande and Lulu G. Graves, New York (Journal A. M. A., May 10, 1924), offer a series of twelve test diets devised for the general practitioner in medicine, to assist him to prscribe well balanced diets of known food value and immediately write out the menus for three meals a day with the accuracy of a trained dietitian. In preparing this table the authors have modified the one of Joslin so as to make it conform to the present day needs of the high fat, low protein diets for patients with diabetes. They therefore preserve a proper antiketogenic balance. They contain a constant minimum amount of protein and a moderately large amount of fat. The carbohydrate foods are in one group an dthe protein

and fat in another. This makes it possible to increase the carbohydrate foods in each succeeding test diet, whereas the quantities of protein and fat remain practically constant. The fat is reduced in the higher diets only in order to keep the total food values below the needs of the individual, and so maintain a modearte undernutrition during the test period. The twelve diets are called test diets, for they are designed to be used only during the first week or two, in order tot eliminate the patient's glycosuria, reduce his blood sugar to a more normal level, and then test his maximum glucose burning ability. After this has been accomplished, the diet is increased in accordance with certain rules, this final, more adequate diet being called the permanent maintenance diet.

RAISING CEREBROSPINAL FLUID PRESSURE

The effect of pituitary extract on cerebrospinal fluid was studied by Harry C. Solomon, Boston (Journal A. M. A., May 10, 1924), on human subjects who were having lumbar puncture for diagnosis or treatment. He found that in the majority of cases an intramuscular injection of 1 c.c. of obstetrical pituary extract causes a rise in the cerebrospinal fluid tension measured by a manometer connected with the lumbar subarachnoid space. This rise begins nearly always in from three and one-half to five minutes after the injection of the drug, and continues for a period of at least forty-five minutes, which is the length of time that the manometric readings were made. The final pressure reading, after pituary extract was injected, as compared to the original reading, shows an increase of from 10 to 100 per cent. In most of the experiments the rise was represented by an increase of about 35 to 40 per cent over the original pressure reading. The first group of experiments was made without the withdrawal of any fluid. In other words, the pressure reading obtained after the administration of pituitary extract represented an invrease over cerebrospinal fluid tension which seemed to be the patient's normal tension. Other experiments were conducted after the withdrawal of from 10 to 25 c.c. of more of the cerebrospinal fluid. When fluid is withdrawn, the pressure drops. There then occurs, normally, a more or less slow increase in the pressure, tending to reestablish the original equilibrium. The time that is required for this varies from one hour to an indefinite period. However, when pituitary extract was given in these cases, after a latent period of from three tot five minutes, during which there was a very slow increase in pressure similar to that which occurred prior to the injection of pituitary extract, a rapid increase in the pressure occurred. These experiments offer very definite proof that, in the human subject, 1 c.c. of pituitary extract given intramuscularly causes an increase in the cerebrospinal fluid pressure. Pituitary extract, injected intraspinally, that is, injected directly into the cerebrospinal fluid, has no effect on the cerebrospinal fluid pressure. In other words, it is apparently quite inert when given directly intot the subarachnoid space. Epinephrin injected intramuscularly caused very little change in the cerebrospinal fluid pressure level in the majority of cases. The intravenous injection of from 100 to 200 c.c. of distilled water, a hypotonic solution, causes a definite rise in the cerebrospinal fluid tension, which lasts for a considerable period of time. The rise in fluid pressure produced by the injection of from 100 to 200 c.c. of distilled water in the average-sized human being is much the same as that produced by 1 c.c. of pituitary extract; namely, between 10 and 100 per cent of the original pressure. The effect of such injections on lumbar puncture headaches was investigated. Observations were made on a group of patients suffering from lumbar puncture headaches and treated by an injection of 1 c.c. of pituitary extract or from 100 to 200 c.c. of distilled water, or a combination of these two injections. In the majority of cases, relief was obtained by the use of either of these methods or a combination of the two. In some cases the effect of pituitary extract was very striking, and, to the patient, wonderful. In a few cases the effect was nil. In most cases, if relief was obtained it was permanent.

THE PHYSICIAN'S PLEA

I am your physician.

I need your co-operation; I desire your appreciation of my efforts.

I want to hold your friendship and to have you cherish my good will.

I aim to progress with my profession so as to give to you the most efficient treatment.

I desire to do good unto the poor and treat without final reimbursement, deserving, needful patients; this is the commandment of all physicians.

It should be our mutual desire to give to each other our best efforts.

I am human.

I subsist not on praise nor mutual admiration.

The most sincere appreciation you can show me is to reimburse me as my services are rendered.

Thus I am better enabled to carry on fitly; to progress; to give to you and your fellow men my best endeavors.

I am your physician, so I ask that you do unto me as you would have others do unto you were you the physician.

—Dr. R. Ruedemann, Jr.

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Original Articles

"RETROBULBAR AND INTRAOCULAR NEURITIS DUE TO HYPERPLASTIC CHANGES IN THE ETHMO-SPHENOID SINUSES"

J. M. SUTHERLAND, M. D.
DETROIT, MICHIGAN

Optic nerve complications from para sinus disease are of great importance to the Ophthalmologist and Rhinologist. This is shown by many contributions to medical literature during the past decade or so. While many important advances have been made in reference to the etiology, diagnosis and treatment of this affection, yet many positive facts remain a closed chapter.

While optic neuritis is not a disease per se, it is looked upon as a symptom of some serious condition. It is therefore our duty, to ascertain the fundamental disease which is producing this affection. We must make a general examination in these cases, and leave nothing undone that would help to establish a positive diagnosis. Such a routine consists of—a minute anterior and posterior rhinoscopic examination, ocular findings, Wassermann reaction, complete urinalysis, neurological examination, and X-ray interpretation.

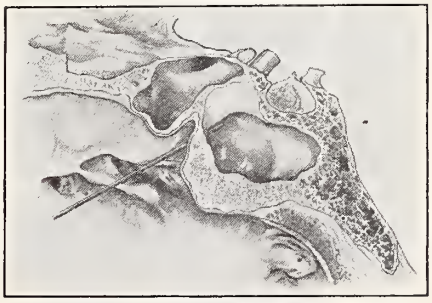
The causes of optic neurosis are manifold and may be either general or local. The scope of this paper will be, however, confined principally to the local condition, namely: Nasal Accessory Sinus Disease, with special reference to the hyper-plastic changes in the Ethmo-Sphenodical region.

ANATOMY

Before considering the clinical phases of this subject, I should like to call your attention to four important anatomical relations which have an important bearing on this subject. First—The relation of the posterior ethmoid cells and the sphenoid sinus to the optic nerve. Second—The intimate relationship of the blood vessels supplying the sinuses and the orbit. Third—The blood supply of the optic nerve. Fourth—Size of Optic foramen and canal.

No. 1

Left Sphenoid sinus 24x21x27 m.m. Ostium Sphenoidalis 7 m.m. from roof. Optic nerve has a channel 11 m.m. long which lies forward in the superior part of the sinus. Optic canal 5 m.m. in diameter. Foramen same size. Turbinals were all atroptic. Large accessory, opening into left Max.—Opening into frontal sinus 6 m.m. F. S. extends 43 m.m. laterally above orbit. The distance from the Bulla Ethmidalis to remote part Ethmoid call was 27 m.m. The mucous membrane lining sph. sinus was adherent to the inferior part of the sinus. The bone separating the optic nerve from the sinus 1/5 m.m. thick.



No. 2

Sphenoid Sinus measured 24x11x15 m.m. Opening 8 m.m. from roof of sinus; caroted sulcus lies in Ant. and lateral part of sinus, beneath and overhanging ledge of bone. Only one large post. Ethmoid cell 12x20x11 m.m. Optic nerve passes diagonally through cell and 11 m.m. of Op. channel jutted out into the cell about 3 or 4 m.m. A deep recess extended 7 m.m. lateral and posterior to optic nerve. This contained polypoid tissue, and the membrane was thick and adherent, both to wall of sinus and this part of optic canal. This was a specimen where the bone covering the optic nerve was affected.

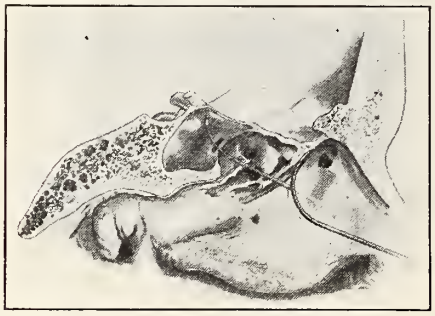
The rest of the Musoca lining this cell was very thin and peeled readily from the bone. The bony wall of ant. part of optic canal was about 1/5 m.m. thick. The post. part about .75 m.m. thick. The inflammatory process had extended through the bone, and the sheath of optic nerve was adherent to the bone at this place for 3 m.m. This is what I term circumscribed Posterior Ethmoiditis—Non-Suppurative. This would be a case where the optic nerve would be involved. This large cell opened into Ethmo-Sphenoidal recess. In such a case operative procedures would be very dangerous, and should your curette happen to find this deep pocket, the optic nerve would in all probability be severely injured or destroyed. Optic canal 6 m.m. in diameter.

Anatomic studies vividly impress one with the great variation in size and relation of these sinuses. The investigations of Onodi, Loeb, Holmes, Sluder, Schaeffer and others have established these facts. It has been definitely determined in some cases, that there is a most intimate anatomical relation existing between the optic nerve and the posterior ethmoid cell and sphenoidal sinus. From anomalous extension of these cells outward and backward they may completely encircle the optic nerve.

During my rather extensive study and careful dissection of some seventy specimens while working last year (April to August, 1922), in the Anatomical Laboratory, University of Budapest, I found some very interesting conditions. I wished to be quite familiar with this anatomical region, and was fortunate in obtaining this wonderful amount of material, which was placed at my disposal through the courtesy of Dr. F. Kiss, of the university.

Out of this number of dissections, I made the following observations:

One of the most interesting specimens which I dissected showed an anomalous extension of the posterior ethmoid cell backward and outward. The cell was very large, measuring 25 m.m. long, 22 m.m. deep and 16 m.m. wide. The optic canal passed through this cell, as shown in the drawing No. 4. The intra canalicular part of the optic nerve was 18 m.m. long, and 10 m.m. of the nerve was enclosed in a thin bony canal which lay almost free in this large cell. There was only a slight contact of the optic canal with the floor of the cell.



No. 3

Dimension of Sphenoid Sinus 13x16x19 m.m. Ostium 7 m.m. from floor of sinus. Optic nerve courses along superior and lateral wall of sphenoid sinus, for 9 m.m. Bone between optic nerve and Sph. sinus 1/3 m.m. thick. Ethmoidal labyrinth from Bulla to Post. Ethmoid cell measured 24 m.m. 19 m.m. deep, ant. group opened superior to Hiatus Similunaris. One large agger cell Ant. and Inf. to uncinate process.

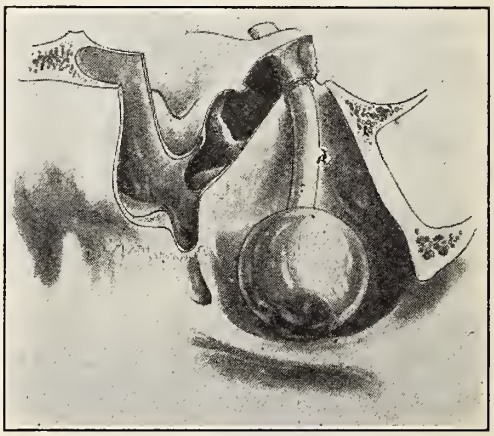
Frontal sinus extended 38 m.m. laterally over orbit. Opened into Hiatus Similunaris, Middle turbinate cut away. Ethmoid labyrinth opened.

Accessory opening into antrum. Carotid artery not in relation to sinus. Optic canal 5 m.m. in diameter.

The sphenoid sinus was very small. It was only 5 m.m. wide and 5 m.m. deep.

I found a very intimate relationship existing between the optic nerve and the posterior ethmoid cell and sphenoidal sinuses in about 33 per cent of all specimens examined. The relationship between the sphenoidal sinus and the optic nerve was found about four times as frequently as that which was found between the posterior ethmoid cell and the optic nerve. In one specimen, I found a very large orbito-anterior ethmoid cell extending back over the orbit to its apex; and at this place, it was in intimate relation with the optic nerve.

In all these specimens, whether the optic nerve was in close relationship or not, with either posterior ethmoid cell or sphenoidal sinus, a very careful inspection of the mucous membrane lining these cells was made. If the mucosa was very thin and apparently normal, it peeled quite easily from the bone, leaving a smooth surface, which could be minutely inspected. Where the mucosa was thickened, it peeled with difficulty. It was adherent to the bone in places, especially to the bone of the sphenoid sinus. After removal of the mucosa lining the sinuses, the body walls of the sinuses were then minutely examined as to their thickness, resistance to pressure, etc. This examination applied particularly to the bony wall of the optic canal. In some specimens, (about 25 per cent), this bony partition was very thin, possibly 1/10 m.m. or thinner; though I should say that in 75 to 80 per cent of the specimens, the bone separating the optic nerve from thes inuses variedf rom 1/5 to 1 m.m. in thickness. This bony wall of the optic canal was minutely examined with a highly magnifying lens. Dehiscences occurred in only 2 specimens of my entire

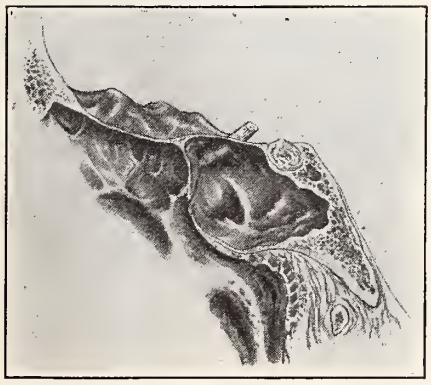


No. 4

This is a evry rare and interesting specimen. The op. nerve passes through a larger posterior Ethmoid cell which measured 25x22x16 m.m. 10 m.m. of optic canal lies within the cell. It is in slight contact only at floor of sinus, otherwise canal lies free in cell. Optic canal and optic foramen 6 m.m. in diameter. This large cell lies above as well as Ant. to a very rudimentary sphenoid sinus which was 4 or 5 m.m. in different diameters. The Ant. Ethmoid measure 25x22x8 m.m. Frontal sinus very large and opened into the Hiatus Similunaris.

series; which is less frequently than other reports have indicated. I observed in some specimens, (about 5 per cent of the total number), that the bony wall of the optic nerve showed changes which were visible to the naked eye, such as a roughness and uneven surface of part of the sinus portion. The bone was thicker in some places than in others. In these specimens, there had been definite pathological changes in mucous membrane lining the sinuses. In each of them, the mucosa was thickened and adherent to the bone, which definitely indicated a previous sinus infection.

Upon removing the optic nerve from its channel, I found evidence of pathological changes on the inner wall of the optic canal in two or three specimens. The surface of the bone was slightly rough, showing that some inflammatory process had affected the bone, and had extended through it. The periostium and dural sheath of the optic nerve were more adherent to the bone at the place where the bone was affected, showing that they, too, had been affected. In two specimens, the bone separating the optic nerve from the sinuses, was about .75 m.m. thick. The sinus portion was affected opposite the place involved, on the inner side of the optic canal. The inflammatory process had extended through the bone at this place. place. In another specimen, where the optic



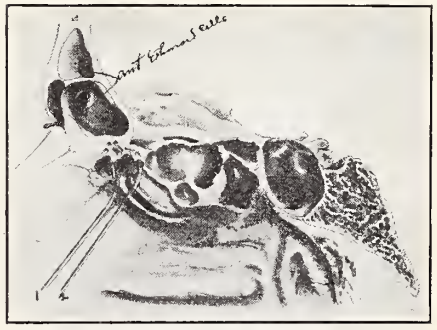
5

Rt. Sphenoid Sinus measured 33x24x14 m.m. Very large pockets on the lateral wall. Ostium only 3 m.m. from roof of the sinus. The optic nerve runs along the sup. and lateral wall of sinus for 10 m.m., jutted into sinus 3 m.m. Part of bone between Op. nerve and sinus removed .25 m.m. thick. The carotid Sulcus and canervous sinus were in very close relation to lateral wall of sphenoid—the mucosa in this specimen showed a chronic fibrous thickening in lower and posterior part of sinus; membrane very adherent and bone rough. Wall of optic canal affected only in one place. Ethmoid labyrinth 34x13x12 m.m. Antrum measured 28x22x21 m.m. Optic canal 5 m.m. in diameter.

nerve was not in relation with either sinus, I noticed a thickened place on the inner wall of the optic canal, resembling a slight exostosis. It was 2 or 3 m.m. long. At this place. the diameter of the optic canal was reduced almost 1 m.m. I found, also, that the optic canals did not always appear to be of the same diameter throughout their entire length. The difference was very slight, however.

Such changes in the optic canal are no doubt responsible for many abnormalities of vision, which never show any improvement, regardless of the treatment. Optic atrophy, partial or complete, could easily be produced by such conditions. The fibers of the optic nerve may be destroyed by pressure alone, without any infection. Furthermore, I believe, that a chronic sinus affection, or any long continued inflammatory process which has extended through the bony wall of the optic canal, can produce an optic nerve involvement, such as retrobulbar neuritis, papillitis or choked disc.

A second consideration is the intermingling of the blood as it circulates between these sinuses and the orbit. This is principally through the ethmoidal arteries and veins, and the diploic veins of bony walls of the orbit and sinuses. Thirdly—We must consider the role played by the blood sup-



11

Rt. Sphenoid Sinus dimensions 18x25x10 m.m. Optic nerve passes through ant. sup. angle of sinus. 6 m.m. optic canal bulges into sinus 2 m.m. Carotid Sulcus in relation to the post. sup. part. Very thin bone less than 1/5 mm. separating optic nerve and ant. carotid artery from sinus mucosa. Sphenoid opening 8 m.m. from roof. Rt. middle turbinal removed. Bulla Ethmoidal is not opened. Two very large ant. ethmoid cells as shown, extends from gabella laterally over orbit for 23 m.m. At first this cell was mistaken for frontal sinus. The opening of this large ant. ethmoid cell lies 6 m.m. post. to frontal sinus opening. There are three posterior Eth. cells opened. Three ant. ones, and one very lart ant. Eth. cell not opened. Hiatus semilunaris ends in large ant. Eth. cell. Frontal sinus opened into a dilated like pouch 8 m.m. above the hiatus semilunaris. One large agger cell ant. to uncinate process. The opening from large ant. Eth. cell is above the bulla. The Eth. Lab. 50x20x9 m.m. Frontal sinus is 33x26x6 m.m. Probe No. 1 in frontal sinus. Probe No. 2 in orbito-ant. eth. cell. This side of nose did not contain any connection between cells and cerebro-spinal region as did the right side. Cribiform plate of Eth. bone present on this side. Optic channel 5½ m.m. in diameter.

ply of the optic nerve, in the transmission and production of diseases of this nerve. The orbital part of the optic nerve is supplied by the central artery and vein of the retina, while the canalicular portion is supplied by a small branch of the ophthalmic artery, and the vein of Vossius carries the

blood from this part of the optic nerve to the cavernous sinus. There are numerous anastomoses between the small branches of this vein and the diploic veins from the bony walls and periosteum of the sphenoid sinus and posterior ethmoid cell. This part of the nerve, due to its tight bony wall, has a particular predisposition to morbid changes.

ETIOLOGY

Upon these anatomic facts, we base our theories regarding the etiology of optic nerve involvement from sinus disease. How does this infection take place? That is not definitely known, though it is supposed to be in the following manner:

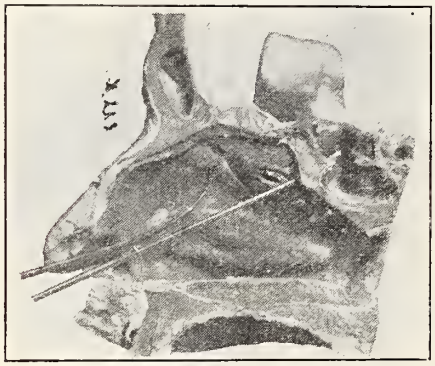
First. Through the blood stream and lymph channels.

Secondly. By direct extension of the inflammation or infection.

Third. By pressure upon the intra-canalicular portion of the optic nerve, from thickening of the bone due to periostitis, an ostitis; or edema of soft tissue.

Fourth. By absorption of toxins from a local cell or cells, or by toxemia from remote sources.

In support of these theories, Gradle



No. 8A

Rt. Sphenoid sinus is divided into two parts; a superior part measuring 18x10x8 m.m. The inf. part 20x11x7 m.m. There was an opening 2 m.m. in diameter between the two parts. It was situated 3 m.m. from the ant. wall of sinus. Post. ½ of the partition was bony; ant. ½ was membraneous. The sinus extended across the median line, and the two cavities shown in picture No. 9 are the parts of the rt. sphenoid sinus, though they are shown as being on the left side. The optic nerve is not in relation on rt. side. The mucosa lining the sinus was thickened and fibrous and very adherent to the bone in the inferior part. There were polypi in this part of the sinus. None in the superior part. Ostium about the center of anterior wall, but opening into superior part. The right middle turbinate has been removed. Ethmoid labyrinth not opened. Uncinate process beautifully demonstrated. Small ethmoid labyrinth 18x11 m.m. The probe shown in photo, passes into left frontal sinus. This part of frontal sinus shown in picture is the left one. The opening from the left frontal sinus enters the right side of the nose 2 m.m. superior to the right frontal duct. Both open into the hiatus semilunaris.

states, "The anatomical relations of the sphenoid or posterior ethmoid cell to the optic nerve are immaterial, and the infection is transmitted through the venous and lymph channels to the optic nerve." Onodi and Loeb think that the anatomical relation of ethmoid and sphenoid sinuses to the optic nerve are very important. Onodi says, "Canalicular neuritis may be excited by an inflammatory process and can be directly transmitted through the walls of the optic canal to the sheath of the optic nerve."

Krause and Elliot are of the opinion, that toxic absorption from a local infection in the ethmoids is the principal etiological factor in their cases. Bordley believed that mechanical pressure on toxemia are the most important factors in producing the symptoms in his cases; while Stark believes that pressure alone is responsible.

Anatomical observations prove very conclusively to me, that the relation between the posterior ethmoid and sphenoid sinuses is very important. Any chronic irritation of the posterior ethmoid cell or sphenoid sinus, with or without suppuration (especially where there are bone changes, such as an osteitis or hyper-plasia), is sufficient to cause an involvement of the optic nerve. For when these changes appear in the wall of the optic canal, the nerve can be affected by direct extension of the inflammation through the bone; as the place where the process penetrates the canal wall, is also the point of contact with the sheath of the optic nerve. And when the nerve becomes

No. 8B

This specimen is the orbital and external view of No. 8A. The ethmoid labyrinth has been exposed, after removing the lamina papyracea. The frontal sinus has been opened externally to indicate the opening of the fronto-nasal duct. The fronto-nasal duct opened normally into the hiatus semilunaris about 2 m.m. below the opening of the left frontal sinus.

affected at this place, it produces an interstitial optic neuritis.

We know that hyper-plastic changes in the mucosa lining these sinuses, with or without an exudate, generally indicate a partial or complete closure of the olfactory fissure, which in turn, may produce marked occular symptoms. This particular form of sinus infection may exist indefinitely, without engaging the attention of either patient or physician. Yet this type of nasal infection gives us much more concern, as irre-

parable damage may be done to the optic nerve before the existing condition is recognized and proper treatment instituted.

CASE REPORT

W. C. T., age 26, electrician, referred to me March 1, 1921, by Dr. L. T. Clark of the research department of Parke Davis & Co. Patient complained of blurred vision of right eye, and a black spot in his field of vision. About three weeks before I saw the patient, he accidentally discovered this defect in vision. He did not know how long his vision had been defective, but supposed it came on suddenly. Black spot was noticed about a week before I saw him. He had no headaches; only slight pain with pressure over eye balls; tension normal. Pupils practically equal, round and reactive. The right, slightly sluggish in reaction. Gave history of having frequent colds, but never any purulent nasal discharge. Denied any venereal infection; was well nourished and healthy in appearance.

EXAMINATION

Nasal, right side: Septum slightly bulging high up. Small ridge near floor of nose. Neither in contact with lateral wall of nose. Anterior end of right middle turbinate was enlarged. The mucosa covering it was thickened; granular in appearance; was dull and lusterless. On pushing the turbinate to the lateral wall of nose, the mucosa was affected as far as I could see. Upon lifting the turbinate upward and toward septum, some changes were discovered extending toward the sinus region. No pus or palypi were found. Inferior turbinate somewhat turgescent. The left nares did not present the same picture. The mucosa over the left middle turbinate had a normal, pink, glistening appearance. Slight bulging of septum high up, though not in contact with middle turbinate.

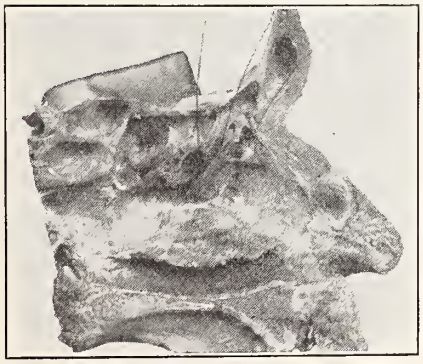
Ophthalmascopic Findings—Frank optic neuritis of right eye, disc slightly blurred, margins indistinct. Arteries slightly contracted, veins correspondingly engorged, but not tortuous. Otherwise, fundus normal. Left fundus normal.

Field of Vision—Concentrically contracted for colors. Absolute scotoma for white and colors. Para central scotoma, temporal side, enlargement of blind spot. Left field normal. O. D. V. 20/50, O. S. V. 20/30. Clinically, I made a diagnosis of a hyperplastic ethmo-sphenoiditis. Was this sinus affection producing the optic neuritis?

Differential Diagnosis—What was producing this nerve affection? The first thing to exclude was syphilis. The case had been previously diagnosed as a luetic neuritis, though no therapeutic test had been made to substantiate this diagnosis. On March 1st, blood Wassermann was made. Reported negative. Spinal fluid was now examined. It was also negative. Syphilis was therefore excluded.

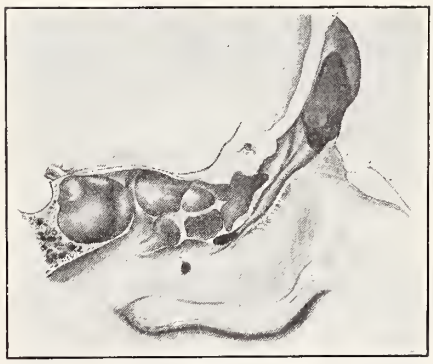
Second: Toxic amblopia must be considered. Patient smoked moderately, drank very little; nothing to indicate such a condition in this particular case.

Third: Some nervous affection, as multiple sclerosis, was also considered. Patient referred to Dr. Irvin H. Neff, on March 3rd, for neurological examination.



No. 9. Left Side of No. 8A

The double sph. cavity shown here is the rt. sph. sinus and belongs to the rt. sph. sinus already pictured in 8A. The left sph. sinus was very rudimentary and deeply situated in body of the sph. bone. It was placed laterally and slightly inferior to the sup. part of the rt. sph. sinus. It was about 5x5x4 m.m. A small duct 4 m.m. long led from this pocket sinus, and opened into the eth. sph. recess. The left optic nerve was separated from the sup. part of the rt. sph. sinus by about ½ m.m. thickness of bone. The mucosa of this particular part of the optic canal was thin and peeled readily from the bone. About 3/5 of the left frontal sinus is shown in picture. 2/5 extends across median line to the rt. side. There was a total absence of any opening from this sinus into the left side of nose. The fronto-nasal duct from this sinus opened directly into the hiatus semilunaris of the right side of the nose as shown by probe in picture 8A. The left middle turbinate removed. Soft tissue removed from inferior turbinate and the rest of the lateral wall of the nose shows a very complex arrangement of ethmoid cells. Bulla ethmoidalis opened. Anterior to the superior part of the uncinate process a large agger cell has been opened, 4 large, deeply and laterally placed anterior ethmoid cells not opened. One large anterior ethmoid cell extends high along the orbital margin of the frontal sinus. The dimensions of the whole ethmoid labyrinth are 30x20x11 m.m. The greatest diagonal distance was about 45 m.m. This was a very large ethmoid labyrinth as compared to the ethmoid labyrinth of right side of the nose.



12

Left Sph. Sinus 18x15x6 m.m. Optic nerve is in intimate relation at the post. sup. angle of the sinus for 7 m.m. The mucosa lining the sinus was adherent to the bone in the inf. part, also in the angle between the carotid sulcus and optic nerve. The bone was thicker along the inf. canal wall, than on the ant. part where the mucosa peeled off, leaving the bone smooth. Ant. wall of optic canal was 2/10 m.m. thick. The Eth. lab. very large. Three large post. Eth. cells opened. Mucosa was thick and adherent to the bony wall of post. cell of this group. The post. group measured 20x14x8 m.m. There are five ant. cells; 3 opened; one very large ant. cell extended 35 m.m. laterally. The roof of this cell formed the greater part of the floor of the ant. fossa of the skull. This plate of bone 3/10 m.m. thick. Frontal sinus 29x40x11 m.m. and opened directly into hiatus semilunaris. A polypoid mucosa was present in frontal sinus. Two opening into antrum. One in the infundibulum; the other 10 m.m. post. and inf. to natural opening. The cribiform plate of Eth. bone was absent in this specimen. A slit in the Eth. bone 4½x17 m.m. long contained the olfactory bulb and nerve. The filament of the olfactory nerve could be beautifully dissected. There was also a direct communication between the nose and subarachanoid space of the brain. Unfortunately, this anomalous condition was not seen in time to give a detailed description of the formation of this connection: however, there existed a distinct connection. This would easily explain the presence of cerebrospinal fluid in the nose. Optic canal 5.75 m.m. wide. Sph. opening in center of ant. wall of sinus.

Any and every possibility of this latter condition was excluded.

On March 2, Dr. E. J. Bernstein had seen the patient. He verified my diagnosis and was also of the opinion that the optic neuritis was due to some sinus infection.

Patient referred to Doctors Hickey and Evans for X-ray examination of the nasal accessory sinuses, on March 2. Their report was negative. This, however, did not exclude the existence of a sinusitis. (Many cases have been reported where the X-ray findings were negative, but a hyperplastic sinusitis was present. Even pus in the sinuses is not always discovered by X-ray examination.) While the X-ray did not help the diagnosis in this case, yet it must always be considered.

On March 4, patient was admitted to Harper Hospital. He said he could not see so well this morning, with right eye. O. D. V. 20/80. O. S. V. 20/30. After dilating pupils with Homeatropine, the fundi were again carefully examined. I noticed that the nerve head was badly swollen and much more edematous, almost obliterating the vessels of the disc. At this time, there were four small hemorrhages in optic disc; these were not present the day previous. The arteries over the fundus were more constricted and the veins more engorged than on previous examinations. Dr. Frothingham was now called in consultation. He very carefully examined the patient's eye grounds. He diagnosed a choked disc of right eye. Left eye normal.

Operation—Gross and microscopical findings: After detaching right middle turbinate from lateral wall of nose, about 2/3 of the bone was snared off. On inspection, the mucosa over the bulla ethmoidalis appeared to be thickened. Bulla was opened and the ethmoids exenterated, especially the posterior cells. The sphenoid was opened. There was no pus or polypi. However, the mucosa lining the posterior ethmoid cells was thicker and more dense than normal.

These pieces of mucous membrane and the middle turbinate, were sent to the laboratory for microscopical examination. The mucosa from the posterior ethmoid cells showed marked round cell infiltration and considerable fibrous tissue. The section from mucosa of middle turbinate showed similar changes. Bone changes, if any, in the turbinate, were not satisfactorily shown.

No. 17

Right sphenoid sinus measured 21x20x11 m.m. Opening 4 m.m. from roof. Mucous membrane thick and adherent to almost the whole of the sinus wall. It was adherent to the wall of the optic nerve. The optic nerve courses along the lateral wall of the sinus. Bone separating sinus from optic nerve, 5 m.m. thick. It was rough and indicated it had been affected. The ethmoid labyrinth opened. Only 2 anterior and 1 large posterior ethmoid cell. Mucosa was adherent to the wall of both cells, more especially the post. one. Dimensions of the Ethmoid labyrinth 35x18x12 m.m. Upon lifting the anterior end of middle turbinate, a very large bulla ethmoidalis could be seen. Also the frontal sinus opening directly into hiatus semilunaris, and the opening of maxillary sinus located in the infundibulum. The optic canal 4½ m.m. in diameter.

Patient remained in hospital for three days. During this time, there was little or no improvement. The next day after irrigating his nose and removing some blood clots from the posterior ethmoidal region, his vision began to improve. On the fifth day, patient noticed quite an improvement in his vision. At this time O. D. V. 20/60+. Ophthalmic examination showed the papilla much less swollen. Margins of disc were clearing up, and the small hemorrhages in the disc were becoming absorbed. Within 10 days after the operation, there was almost complete involution of the neuritis. The small hemorrhages had all disappeared, and the margins of disc were quite distinct. The arteries were yet slightly constricted, and the fundus was somewhat paler than normal; though otherwise negative. Patient said the scotoma was more faint, and was clearing in the center.

March 25—O. D. V. 20/30-2; O. S. V. 20/30+. Margins of right disc more sharply defined. Slight pallor of disc. Arteries seemed less constricted than they were on previous examinations.

Nasal examination showed a very satisfactory condition. There was no indication of pus in his nose, and I had never seen any. The opening made in the sphenoid had almost closed; only a small probe entered the sphenoidal sinus.

April 1—O. D. V. 20/30-2; O. S. V. 20/30+. Condition about the same.

April 10—Disc margins very distinct, disc had a slightly paler color, suggestive of some secondary optic atrophy. Refracted patient; cycloplegic used.

Rx—O. D. —50C-25x135=20/20+2
O. S. —50C-25x180=20/20+4

April 28—Small scotoma persists. Slight enlargement of blind spot. Very little, if any improvement in optic disc. Progress seems to have reached its limit. O. D. V. 20/20; O. S. V. 20/20. Decided to do submucous today.

May 10—Eye grounds about the same as they were before submucous. Some secondary optic atrophy; not enough to affect his vision. Scotoma persists, also some enlargement of blind spot. Retinal arteries slightly constricted, vision normal with glasses.

May 25—No further changes in disc, atrophy not progressing. Scotoma is much less than any time since operation. Blind spot about the same, vision more acute. O. D. V. 20/20+ with glasses.

June 15—O. D. V. 20/20+ with glasses. Atrophy not progressing. Retinal arteries are still constricted. Fundus slightly paler than normal.

Juuly 1—O. D. V. 20/20+; O. S. V. 20/20+, with glasses. No change in disc or fundus. Field of vision still contracted for colors. Atrophy not progressing. Blind spot remains enlarged.

July 15—Today there is a beginning yellowish exudate adjacent to upper temporal border of disc. No other changes. O. D. V. 20/30—; with glasses 20/20+. O. S. V. 20/20+.

July 30—Area of yellowish exudate has slightly increased in size, about 1/3 size disc. Vision remains the same. No progressive changes in disc.

August 6—Condition about the same. Retina has slight pale color, but fundus is otherwise normal. No change in vision.

August 9—Patient went to Chicago for two weeks vacation. Had him see Dr. Harry S. Gradle. Dr. Gradle reports the following: "Externally both eyes normal. Pupils equal, round and reactive. Right eye: secondary optic atrophy. Adjacent to the upper temporal border of the disc is an area of organizing yellowish exudate about ½ D. D. in size. This corre-

sponds fairly accurately to the scotoma. The retinal arteries are constricted. The retina is somewhat pale, but the fundus is otherwise normal. The blind spot showed enlargement.

No. 21

Sphenoid sinus 31x24x20 m.m. Opening 8 m.m. from roof. The anterior wall of sphenoid sinus extended much further forward than normal, projecting anterior almost 1/3 the length of the middle turbinate and ½ of superior meatus. The mucosa lining the sinus peeled readily from the bone. The optic nerve passed diagonally through the superior and lateral part of sinus for 10 m.m. About 2/3 of the channel jutted out into sinus. The bone forming the anterior part of optic channel about 1/10 m.m. thick; posterior part 1/3 m.m. thick. The ethmoid labyrinth not opened intra nasal; anterior and posterior ethmoid cells opened extradural. You see and understand how the roof of these cells can form the greater part of the floor of the anterior fossa of the skull. The dural measurements of the anterior ethmoid cells, 18x35x6 m.m. The posterior cell 6x13x4 m.m. The anterior end of the middle turbinate cut off to show the opening of the naso-frontal duct. It appears to have opened into the hiatus semilunaris. It does not, its opening is 4 m.m. sup. to the hiatus as the hiatus ends in a blind anterior ethmoid cell. Frontal sinus 14x31x22 m.m. The carotid canal is also in relation to the posterior and lateral wall of the sphenoid sinus. Opening into maxillary sinus closed due to some chronic inflammatory condition. Optic channel 4¾ m.m. in diameter.

The right eye evidently has had a most severe neuritis, both retrobulbar and intra ocular; that, without doubt was due to the ethmoid and sphenoid trouble. Fortunately you found it in time and did the correct thing to avoid much further trouble. There is no active process present now, but I believe the resorption can be helped by 10 drops K. I. t.l.d. and 1/100 gr. strychnine injected bi-weekly in the right temple.

Please accept my thanks for referring him to me, as well as my congratulations on the splendid results you have obtained. Only too many of such cases are overlooked until they are hopeless."

August 28—Patient reported to office. I began the temporal injection of 1/100 gr. strychnine bi-weekly. I had already given K. I., but gave it again; I kept up this treatment until the 15th of October. During this time, I could not see any further improvement, except possibly his vision seemed to be more acute. O. D. V. 20/20+. O. S. V. 20/20+, with glasses.

January 5, 1923—O. D. V. 20/20+; O. S. V. 20/20+, with glasses. During my absence abroad, patient received no treatment in reference to his eye. I cannot detect any changes in this fundus of his eye since October 15, 1921, except that the area where the exudate occurred shows degenerative changes of retina with some pigmentation. Area about 1/3 size D. D. Visual field still contracted, though not so much as when I last saw him. Blind spot not so large as in October, 1921. Scotoma present. I wanted to reopen sphenoid to see if any further progress could be made. Patient refused operative interference.

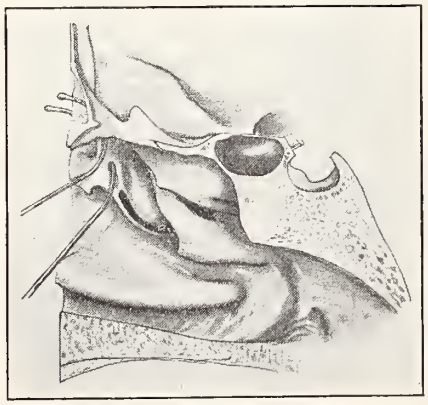
September 8, 1923—It has been two and one-half years since the patient was referred to me. During this time, I have seen the patient a great many times and have watched the case very carefully. I have mentioned only a few of the times he reported to my office; however, I have reported the condition just as I have found it, and at frequent intervals, so as to make my record complete, though not too cumbersome.

A careful ophthalmoscopic examination of right eye today shows the same condition as reported January 5th, this year. There still persists a scotoma. His visual field about the same. The blind spot is slightly smaller than it was in January, though it shows some enlargement.

Patient refused to have any more surgical interference, as he said he was very well pleased with the results we obtained. He claims his vision is just as acute with the right eye as with the left, and he was satisfied to leave well enough alone. O. D. V. 20/20+. O. S. V. 20/20+, with glasses.

DIAGNOSIS

Ocular findings—Could all these severe intra-ocular changes and symptoms be produced by a nasal infection, such as a hyper plastic ethmosphenoiditis? I believe they were. However, all cases do not present the same picture. Your opthalmoscopic



No. 23

Body of sphenoid very thick and cancellous sph. sinus measured 14x9x17 m.m. The optic nerve coursed along the lateral wall of sinus for 12 m.m. This part of optic canal jutted into the sinus 2 m.m. The bone separating the optic nerve from sinus was 1/10 m.m. thick. This was one of the two specimens presenting a dehisence in my series of more than 70 specimens. The dehisence could be seen only with a magnifying lens. The mucosa peeled very easily from this part of sinus wall, sph. opening 4 m.m. from roof of sinus. The ant. ½ of middle turbinate has been cut off, showing large bulla, the hiatus semilunaris ending in an ant. ethmoid cell and opening of the frontal sinus located 6 m.m. above the hiatus semilunaris. The frontal sinus on this side was divided into two distinct and separate sinuses, each one having a separate opening into the nose, as shown by the probes in the picture. The external part measured 15x30x16 m.m. The internal part was 17x16x6 m.m. After making a saggital section through the ant. part of this specimen this arrangement of the frontal sinus was discovered. Also I noted a large ant. ethmoid cell between the lower one-half of ext. part of frontal sinus and orbit which extended laterally 28 m.m. The roof of this cell formed part of the floor of the ant. fossa of the skull. It is interesting to note also the position of the sella tercicia. It is post. and slightly inferior to the sph. sinus, being separated from the sinus by 3½ m.m. thickness of the bone. Optic foramen and canal 4 m.m. in diameter.

findings may vary from only a slight hyperormia of the disc, to a papillitis, choked disc or, finally optic atrophy. These changes will depend upon the severity and the course of the infection.

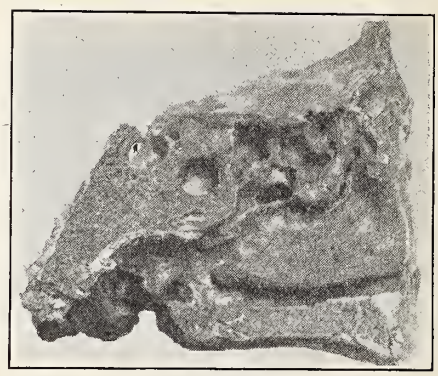
Perimetric findings:

(a) Central scotoma, 1st for colors, later for white.
(b) Enlargement of the blind spot.
(c) Contraction of the field of vision, especially for colors.

Speaking from the ophthalmologist's view point, Von der Hoeve says, "A central scotoma, enlargement of the blind spot and contraction of the field of vision, are very important symptoms and they indicate that the optic nerve is affected. They show us the optic nerve is diseased, but teach us nothing of the origin of the infection. We must always consider that every retrobulbar or intra-ocular neuritis may begin with these symptoms, whether it is caused by a multiple sclerosis, by syphilis, tuberculosis, adental infection or from a nasal infection. Therefore, the ophtholmologist has in the eye, no sign to distinguish the origin of a retrobulbarn neuritis."

From the rhinologist's stand point, MacKenzie says, "The absence of any sign of disease inside the nose is not sufficient to exclude sinusitis from the diagnosis." Many cases have been reported by White, Vail, Skillern, Sluder and others, where repeated nasal examinations have been negative, yet a sinusitis existed. We can have a circumscribed sinustitis in either a posterior ethmoid cells or in the sphenoid sinus where only a part of the mucosa lining of these cells is affected. I found several such instances, especially in the sphenoid sinus. This was determined by thickened mucosa being adherent to the bone. The mucosa was thick in these places as compared to the very thin normal mucosa lining the rest of the sinus. The thickened mucosa was not always adherent, unless the bone had been involved. Sometimes the mucosa lining the whole sinus was thickened and fibrous. In such cases, your rhinoscopic examination will be negative, unless the middle turbinal is involved. (I mean the hyper plastic type of infection without pus).

The X-ray, as already mentioned, may not be of any diagnostic value, yet it must always be considered. Von der Hoeve stresses the importance of the images of the optic foramen. He says, "If I find a normal foramen, I do not believe the canal can be much deformed. However, great care must be taken not to misinterpret a picture, which may be the result of a wrong position." He recommends Rhese's method for demonstrating the optic foramen and superior orbital fissure; and cites a case of a physician who had a retrobulbar neuritis and



No. 24

The sph. sinus of the left side is deeply placed in the body of the sph. bone. It is small, measuring 10x8x8 m.m. It is placed inferior to the depression from the right sph. sinus which extends across the median line to the left side. You also note the position of the sella tercicia. There is 5½ m.m. of bone between it and the sinus. The pituitary gland which occupies the sella tercicia is almost entirely surrounded by bone. This would be a condition where most severe headaches would be the result of the anomolous anatomical formation. The optic nerve was not in relation to the sinus. The middle turbinate has been removed and the ethmoid lab. opened. The bulla ethmoidalis is very prominent. There are three posterior ethmoid cells, one above and two inferiorly placed. The ant. group consists of three cells which were opened. The ethmoid labyrinth measured 31x24x12 m.m. The frontal sinus opened directly into the hiatus semilunaris. The frontal sinus measured 18x11x18 m.m. It was divided into two distinct cavities, the outer one being a closed non-communicating cavity. Both a saggital and a longitudinal section is shown here, though it does not demonstrate what the author had in mind when the specimen was sawed in this manner. I should like to call your attention to the very thick septum of bone separating the anterior from the posterior ethmoid cells. This bone measured as much as 3 m.m. in thickness. The septa between the ant. ethmoid cells was also about 1 m.m. thick, which is much greater density than normally exists in the ethmoid labyrinth. The mucosa lining the cells was very adherent and showed a chronic thickening with polypoid degeneration.

choroiditis and who had been operated upon several times for some sinus disease. When he (Von der Hoeve) saw the man, he found a huge enlargement of the blind spot, especially for colors; nad a hyperamic disc. X-ray showed a clear ethmoidal region, except a rectangular spot close to the optic foramen and superior arbital fissure. De Kleyn opened, at that spot, some posterior ethmoid cells in which he found some purulent secretion. From that time, the man was relieved of all symptoms.

The case I have reported, has an enlargement of his blind spot; an absolute scotoma; a slight optic atrophy; and some constriction of the retinal arteries. His vision, however, is normal with glasses. He had two operations. Ethmoid exenteration and opening of sphenoid; later, a submucous. I have no information about the optic foramen, as the patient did not return for another X-ray examination. This may be a case where there is some abnormality of the optic canal, or optic foramen, and these symptoms in such a case, would be irrepar-

able, regardless of what was done. It is also possible to assume that I never opened all the posterior ethmoid cells. Maybe I should have made a much greater opening into the sphenoid sinus. This is speculative, however.

We must, however, take into cognizance the hyper plastic changes that had already taken place in the mucosa lining the posterior ethmoid cells, as shown by a microscopical examination. The mucosa covering the right middle turbinal presented a microscopic appearance of hyper plastic changes. Would it not seem plausible to assume the sinus mucosa was the primary site of the infection, and that later the mucosa covering the middle turbinate was attacked? The mucosa lining the posterior ethmoid cells was thickened and fibrous. How much, if any, bone changes were present, I do not know. The mucosa was not removed from the sphenoid sinus.

There is a marked difference of opinion, however, in referenec to retrobulbar and intra-ocular neuritis and choked disc being caused by hyper plasia of the mucosa lining the sinuses, particularly, in the absence of an active suppuration. Sluder and Wrights' observations and research have convinced them, that optic nerve complications are caused by a hyper plasia of the lining mucosa; and that this nerve involvement, be it a retrobulbar neuritis, papillitis or choked disc, is due to a long continued pressure which slowly develops. Cushing states that the hyper plasia of the mucosa is quite incapable of producing a retrobulbar neuritis, papillitis or choked disc. White is quite emphatic in his views, believing that pressure on the optic nerve from hyper plasia of the sinus mucosa *does* produce optic nerve complications, and much more often than they are recognized. White cites a number of cases where he attributes the optic nerve involvement to hyper plasia of the sphenoidal mucosa. Onodi states that pressure upon the nerve, itself, from hyper plasia, or upon the nutrient vessels supplying the nerve, will occasion visual disturbances.

No. 29

The right sph. cavity is very large. Has 2 pockets, one very deep recess. This was filled with polypoid degenerated mucosa which was very adherent to the bone. The sinus measures 31x22x20 m.m. in the deepest recess. The bone showed distinct chronic inflammatorycha nges. There is a very intimate relation between this sinus and the optic nerve. The nerve passes obliquely along the roof and the lateral wall of the sinus, 7 m.m. of the optic channel lies within the sinus. It jutted into the sinus 3 m.m. The mucosa along the posterior part of the optic nerve was slightly adherent to the canal wall. The mucosa over the anterior part of the optic canal was very thin. The anterior one-half of the middle turbinate was removed and lateral wall covering the post. one-half of the turbinate and lateral wall of nose was removed. There were 3 distinct openings from the posterior ethmoid group into the superior meatus of the nose. In the anterior group there were 2 openings posterior to the bulla and one anterior to the bulla, leading into a very large orbito-anterior ethmoid cell. This opening was 3 m.m. posterior to the opening leading to the frontal sinus. The sinus pictured in this specimen, which anyone would think was the frontal sinus, is the large orbito-ethmoid cell. It measures 16x24x22 m.m. The bone separating the dura from this cell was about 1/3 m.m. in thickness. The right frontal sinus was very small. The top of the sinus not extending any higher than the external canthus of the orbit. The inferior turbinate very atrophic. The optic canal was 4 m.m. in diameter.

I do not agree with Sluder or White in their contention that pressure alone from hyper plasia of the sinus mucosa is sufficient to produce these changes in the optic nerve, especially if the bone is not affected. Basing my opinion upon anatomic studies and observation, I do not beileve that pressure alone, even in the presence of an active suppuration, is sufficient to produce a papillitis or choked disc. While the bony wall of the optic canal in many specimens, was very thin, yet in these specimens where the bony wall was very thin, I never observed one instance where there was any evidence of a thickened mucosa covering the bone. It was always thin, had a normal appearance and peeled very readily from the bone. In the specimens where the mucosa was thickened and fibrous in places, the bony wall of the optic canal was also thicker and quite resistant to pressure. While the bony wall of the optic canal remains intact, I do not believe pressure from the hyper plastic mucosa has any effect what-so-ever in the production of the optic nerve involvement. It is therefore necessary for the infection, or inflammation, or whatever it may be, to affect the nerve directly. And this, in my opinion, is either through the blood and lymph supply, or by direct extension of the inflammation or infection through the bony wall of the optic canal. This affects first, the sheath of the optic nerve; and thence, by contiguity of tissue, extends to the central vein of vossius.

The conformation of the optic canal or the optic foramen could also be a predisposing factor in optic nerve involvement. In some of my specimens where there was a variation in the size of either canal or optic foramen, the slightest degree of edema or pressure within the optic canal, could cause

a degeneration of the nerve fibre with subsequent optic atrophy.

From these facts, we can now readily understand how the characteristic signs of

No. 30

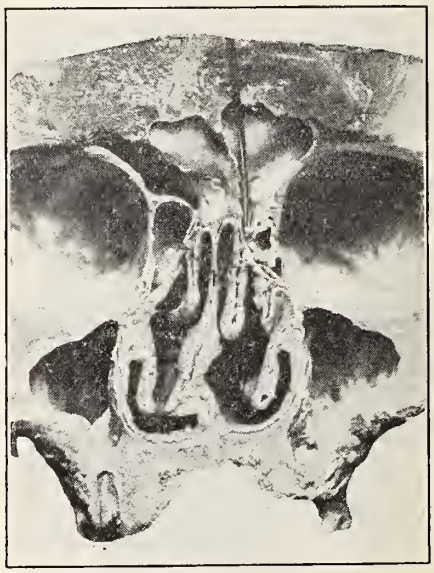
The measurements of the sph. sinus is 20x22x24 m.m. The sinus extends backward and downward behind a ledge of bone which is the bony partition between right and left sph. sinus. The mucosa lining the sinus was very adherent to the bony wall at the lower part of the sinus. The bone shows microscopic changes of a chronic inflammatory nature. The optic nerve was in very intimate relation to the sinus as it passed diagonally along the lateral and post. wall of the sinus for a distance of 8 m.m. The bony wall of the optic canal did not show any inflammatory changes and the mucosa peeled readily from the bone. The bone separating the optic nerve from the sinus was 1/10 m.m. thick. The carotid sulcus is also in intimate relation as it courses along the lateral and posterior wall for 7.5 m.m. The second division of trigeminal nerve also passed along the external wall of the sinus for about 14 m.m. The bone separating this division of the fifth nerve from the mucosa of the sphenoid sinus was about 1/5 m.m. thick. Upon inspecting the sphenoid cavity, this nerve can be readily seen through the bony wall of the sphenoid sinus. The sphenoid opening was about 6 m.m. from the roof of the sinus. The most posterior ethmoid cells opened. It measured 15x12x12 m.m. One large posterior cell not opened. The anterior end of the middle turbinate removed. Picture shows the anterior group as it opened into the bulla ethmoidalis very prominent, also the uncinate process and the hiatus semilunaris are beautifully demonstrated, showing the hiatus semilunaris ending in a large anterior ethmoid cell. The frontal sinus is very small, being 12x7x17 m.m. The opening of the frontal sinus is situated 10 m.m. above the hiatus semilunaris. This position of opening of the frontal sinus accounts for the great difficulty in probing the frontal sinus. The bony wall between the orbit and the ethmoid cells and part of the frontal sinus had been absorbed, or else it was congenitally absent. The mucosa did not present any particular appearance to indicate a previous suppurative sinusitis. This is probably one of the freaks of nature.

a sinus affection, enlargement of blind spot, and central scotoma are produced. The infection, edema or whatever may be the exciting ccause, first affects the periphery of the optic nerve, giving rise to an interstitial optic neuritis. Here the peripapillar bundles become involved and cause an enlargement of the blind spot. The process can now extend by contiguity of tissue to the central vein of vossius, exciting an axial neuritis, and thus involving the papillo-macular bundles, which causes the central scotoma.

Even a paradoxical behavior of the infection may be the result Fuchs reported a case which showed only a small scotoma for red. Here the central fibers of the optic nerve must have been involved, affecting the papillo-macular bundles.

PROGNOSIS AND TREATMENT

The prognosis or retrobulbar or intraocular neuritis, due to a sinus affection, depend upon the course of the infection and proper treatment. In acute cases, the prognosis is better than in the chronic and slowly developing cases. In the former, the symptoms may occur with amazing rapidity, and your patient may be blind in a few hours. Early and proper surgical intervention in these cases gives excellent results unless some intra-cranial complication develops. Many spectacular results of this type of sinus infection have been reported. In the chronic non-suppurative ethmo-sphenoiditis, the prognosis must be a guarded one, be-



No. 33

The saggital section through the frontal sinus, orbita, antrum, etc. This is a very interesting specimen because it shows the pathological changes that can be seen from a chronic non-suppurative ethmoiditis. The right frontal sinus was 30x20x18 m.m. The opening from the frontal sinus into the nose has been closed due to some chronic infection with bone formation in this region. Below the frontal sinus and above the orbit can be seen a large orbita-anterior ethmoid cell, which measures 28x7x25 m.m. There isa nother large anterior cell which is about 20x8x5 m.m. placed between the orbit and the ossified part of the frontal sinus. The right middle turbinate shows polypoid changes, especially the anterior end. This polypoid mucosa and tissue covering the middle turbinate, extended also into the ethmoid cells. The left frontal sinus shown with probe leading through the fronto-nasal duct into the nose. Sinus is irregular in shape and has the following dimensions, 24x17x8 m.m. The fronto-nasal duct leads directly into the hiatus semilunaris. On the left side, the ethmoid cells are filled with thick polypoid mucosa. The lamina papyracea was 1/10 m.m. thin on both sides. The septum had a very great spur along the vorner jutting out to the right side, with a very large corresponding concavity on the opposite side. In comparing the right and left maxillary sinuses we see that the right maxillary sinus is smaller than the left, being 25x18x35 m.m., while the left is 30x22x32 m.m. Both maxillary sinuses lined with a thick polypoid mucosa. The left maxillary sinus extended 5 m.m. deeper into the maxillary bone and a tooth can be seen jutting into the sinus.

cause it is quite impossible to determine in advance, what the final result will be. In many of these cases, irreparable changes, no doubt, have already occurred, both in the optic nerve and the bony wall of the sinuses, before such cases are seen or recognized. Unfortunately, in such cases, your probable result will be only a partial recovery, if any results, whatever, are obtained. In the chronic sinus infections, where no permanent injury to the optic nerve has been done, the nerve will recover, if the focus of infection is removed.

Then, there are unfortunate individuals whose optic canals or optic foramen are smaller than normal, say 3½ or 4 m.m. or less. In these cases, a severe retrobulbar or intra ocular neuritis from a sinus affectation would probably result in a subsequent optic atrophy and blindness. I have never seen or heard of such a case, but my observation of the optic foramen and canal would lead me to suspect such a prognosis.

TREATMENT

It seems to be the consensus of opinion, that the most logical treatment in these cases is surgical; that is, in the cases where there is positive evidence of some sinus affection,w hether this be determined by intra nasal examinations or X-ray findings. The sinus or sinuses which are involved should be opened and drainage well established. In the acute sinus infections, reports are universally good, if your surgical intervention is quickly and accurately performed. I have no statistics to give in reference to absolute and permanent cures in the chronic non-superlative or hyperplastic ethmosphenoiditis, but Vail, Sluder and particularly White have reported cures with the complete restoration of the function of the optic nerve in some such cases. But I believe that in the majority of cases of this form of sinusitis, irreparable changes have already taken place, either in the optic nerve or bony wall of the sinus; and that we can not expect a complete recovery. You may consider yourself very fortunate if a partial function of the optic nerve is restored, after removing the middle turbinate and opening the ethmoids and the sphenoidal sinus. In a given case, where it is possible to determine the shape and size of the optic foramen by X-ray interpretation, much valuable information may be obtained, regarding the optic foramen and the superior orbital fissure. Here, very accurate and essential anatomical relations may offer some aid in our surgical procedures, and insure better and more permanent results. However, there remains much to be done along this particular line of thought, before we can arrive at any definite conclusions.

The treatment of these cases, as described, should be surgical.

What are we to do with those obscure optic nerve conditions where it is impossible to determine the presence of a sinus affec-

No. 70

The saggital section through the orbits, ethmoid cells and the sphenoid sinus. This picture gives a very definite illustration of the width of the ethmoid labyrinth. The right eth. lab. measured 26x8x25. The left ethmoid labyrinth is approximately the same dimensions as the right. Right sph. sinus measured 15x10x22 m.m. The mucosa lining the cell was very thin and easily from the bone. The optic nerve passes along the lateral and superior wall of the sinus for a distance of 8 m.m. The bone separating the nerve from the sinus is about 1/5 m.m. thick. The left sphenoid sinus measured 15x12x20 m.m. The mucosa peels very easily. No visible bone changes. The optic nerve is more prominent in this sinus than in the right one. 10 m.m. of optic nerve is in sinus. The bone separating nerve from this sinus is about 1/10 m.m. in thickness. The internal carotid arteries are in very close relation to both sinuses.

tion? The patient must be thoroughly examined by a competent internist and neurologist to exclude any form of internal or nervous diseases, which might have produced optic nerve involvement. Even though the patient may have lues, tuberculosis, multiple sclerosis or tabes, he may also have a chronic sinus disease. We had two such cases in the Royal Hungarian Eye Hospital in Budapest, in 1922, in which the patients had an optic neuritis. They gave a history of a previous exposure and small chancre; blood Wassermann xxxx, in both cases. Anti-luetic treatment did not have any affect upon their eye conditions, and they were progressively getting worse. Professor Grosz then referred both of these patients to a rhinologist and requested an exploratory operation on the nasal accessory sinuses. The posterior ethmoids were exenterated and the sphenoid opened. Both of these cases began to improve very soon after the operation; and within two or three weeks their eye symptoms had all disappeared. Therefore, in any case of optic neuritis, especially unilateral affection, one must always think of an accessory sinus disease, as being an important etiological factor in the production of an optic nerve involvement, regardless of the negative nasal

findings. Furthermore, I believe that every case of retrobular or intra ocular neuritis which does not soon improve under the proper medical or local treatment, should be submitted to surgical treatment without further delay.

From a detailed study of the literature on this subject, and from my anatomical observations and research, I will say, in conclusion, that we must have more accurate anatomical knowledge, and more definite pathological reports, in order that we may obtain the most gratifying results from our operative procedures.

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OSTEOMYELITIS

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Osteomyelitis is an infective disease resulting from hematogenous infections in cases of traumatism or from peritostitis. It may involve the soft tissues and cells of the Haversian canals or the medullary cavity. Various micro-organisms, including staphylococci, strephtococci, typhoid bacilli and colon bacilli, have been discovered.

Chronic osteomyelitis is indefinite as regards its duration, and is interrupted at intervals by acute exacerbations of the infective process. During the periods of inactivity, a slow series of pathological changes are taking place. There is an increase in new bone formation. The lesion becomes less tender, the redness and oedema disappear and the articulating surfaces become less painful and stiff. The sinuses contract and their openings become smaller, often becoming lined down to the bone by an ingrowth of epithelial cells or there is an inversion of skin. The discharge becomes less purulent and profuse until it reaches the stage of serious fluid. During this period the patient makes rapid strides in his general health, his temperature is normal, his appetite good and it appears that a complete recovery has taken place. Suddenly there is a rapid rise of temperature, the effected part becomes swollen, reddened and extremely painful. So long as no radical surgical treatment is instituted, so long will the patient suffer these severe exacerbations of the process.

Septic infection, after acute symptoms have subsided, is a powerful stimulant to osteogenesis.

If a wound exists as in a compound fracture, the diagnosis is evident. The constitutional symptoms of septic absorption are present. The pain is intense. The discharge purulent and offensive, often containing bone particles and tissue sloughs. The periosteum is thick, red, and separates easily. In cases without wound infection, the onset is sudden and violent and death may result from systemic poisoning. The disease is generally ushered in by a chill followed by a high temperature. There is an intense aching pain in the bone and joint tenderness. Within a few days, there is pus in the medullary cavity and a rapid destruction of bone begins unless the tension is relieved by operation. The soft tissue overlying the bone becomes swollen, glossy and red. This disease is often mistaken for rheumatism because the joint is painful and swollen.

The invading organisms come from the blood stream and the condition may be considered a complication of typhoid, tonsillitis, influenza, empyema or other diseases.

TREATMENT

Acute osteomyelitis, without wound infection, is serious and rapidly progressive. Murphy insisted on operation immediately after the initial chill. The infection is under tension and destroys tissue at a rapid pace. The treatment consists in opening the medullary cavity by means of chisel or drill, and making a gutter through the cortex for the entire length of the infected area. During the acute stage, drainage is necessary, but it is not advisable to curet.

The majority of cases, however, are those following trauma and result in a chronic osteomyelitis. When the wound is draining satisfactorily and there are no signs of extension or exacerbation of inflammation and the general condition of the patient is good and there is progressive union of fractured bones, it is better to wait allowing as much union to take place as possible. If, however, the drainage is not adequate and there is a rise of temperature and the patient's general condition is poor, then immediate operation is imperative. The elimination of all dead and diseased bone is the first step in the treatment. Failure in the treatment of chronic osteomyelitis is usually due to the fact that mere cureting is done through a small opening instead of wide excision of the diseased soft tissue as well as the sequester and unhealthy callus. The general principles of drainage apply here as well as in the evacuation of abscess cavities elsewhere. It is the elimination of the cavity by the entrance of periosteum and the adjacent soft tissues that results in a permanent cure. This is accomplished by the subperiosteal removal of one wall and then bringing about an adhesion of the remaining wall where there is an extensive destruction of overlying soft tissue, a plastic operation is necessary. All bleeding must be stopped. This precaution is essential for it may result in extensive post operative necrosis. Sutures should not be inserted nor is it advisable to pack the wound. Several Carrel tubes are inserted in the recesses and the wound irrigated with saline or Dakin's solution. Complete closure of the would should be discouraged for several days until all evidence of infection and further necrosis has passed. The wound may now close by granulation or a secondary operation may be done.

In operation on aseptic cases, it is well to outline the size, shape and position of the

sequestrum. This is best done by use of radiograms. The incision is then planned to effect a soft tissue flap which is replaced after the necrotic bone and sequestrum have been removed. This method is only possible in selected cases.

Aluminum-Potassium Nitrate treatment has recently been discovered by Thorek. It is not a substitute for rational surgery, but a pre-operative treatment in badly infected cases, or procedure in cases that have failed to respond to operative interference or those who refuse operation, or a post-operative treatment in infected cases. "It is not an antiseptic, but an accelerator of bacterial growth tending by rapid propagation to lower the vitality of the infecting organisms, thereby, assisting the body to eliminate the invading organisms." Pain in most cases is relieved. It does not attack normal tissue or interfere with granulation.

CASE REPORTS

Case No. 1—Patient was suffering with intense pain in the right thigh, the leg was swollen, and the skin red and glossy, his temperature was 103°. He remembered a fall 27 years ago, at which time his thigh pained him and he was confined to his bed for three weeks. Several years later sudden pains appeared with swelling. At this time, the skin in the upper third of the thigh opened spontaneously and a spicule of bone escaped with some pus. The wound closed and did not trouble him until the last attack in 1921, at which time I made a diagnosis of osteomyelitis of the right femur. The early injury was in all probability a fractuure of the femur. X-ray examination showed a tunnel through the femur. The thigh was incised and a large sub-periosteal abscess opened. The cortex underneath was brittle and necrotic. It was chisled away until the medullary cavity was exposed, the gutter being three inches in length. Pus which was under tension escaped freely. The wound was drained with Carrel tubes and irrigated. Complete recovery. Pathological microscopic report reads as follows: "The tissue contains a large amount of purulent material in the interspaces. The bone is rarefied and macerated. An occasional giant cell is seen. Diagnosis: Severe osteomyelitis with extensive destruction of bone."

Case No. 2—Compound, comminuted, transverse fracture of the lower third of tibia and fibula. The overlying soft tissues were contused and macerated. The leg was greatly swollen and primary treatment was rest and an effort made to sterilize the wound. After some difficulty, this was accomplished. An open reduction was done without mechanical fixation. Three weeks later, the leg became red and swollen and there was a discharging sinus at the point of fracture. Aluminum Nitrate treatment was used in this case with gratifying results. After a long period of treatment, the wound became sterilized, but there was no union. A Lane's plate was applied and removed after several weeks.

Case No. 3—Patient is a male child 4 years old. Two months after an illness, which the mother described as influenza, the boy became lame and he complained of pain in the right ankle joint. His general condition was poor. He had a rise in temperature daily. The swollen, glossy, reddened area was incised. The articulating end of the tibia was enlarged and the periosteum mottled. The bone was soft and spongy. Pathological examination was tuberculous osteomyelitis.

AUTOMOBILE BATTERY BURNS OF THE EYES AND ADNEXA—WITH CASE REPORTS

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Sulphuric acid as an etiological factor in severe burns of the eye and adnexa has long been known. Much has been written concerning its potential dangers when thrown or splashed into the eyes so that most industries using this acid have warned their employes and are taking necessary precautions in preventing accidents. Recently with the advent of the automobile with its self-starter a new source of danger has arisen of which the profession and the public have received little or no warning. For this reason the following cases are reported and sulphuric acid burns of the eyes resulting from the careless examining, repairing and recharging of the wet celled storage batteries are discussed.

Most of the cases were examined and treated at the Akron Eye, Ear, Nose and Throat Hospital, Akron, Ohio. Each case is interesting because it illustrates the etiology, pathology, prognosis, complications, treatment and prevention of mild and severe automobile battery burns of the eyes.

CASE REPORTS

Case 1.—C. B., male, age 30; automobile mechanic. Family and personal history negative. While examining and recharging a wet celled storage battery at his garage March 5, 1922, the present trouble began. Shortly after adding concentrated sulphuric acid to the various cells, he leaned forward to examine them, holding a burning torch near the uncapped cells of the battery. The hydrogen gas which was liberated by the electrolytic reaction between the acid and the zinc and lead plates immersed in the solution, mixed with air, ignited and exploded, throwing the acid into the face and eyes.

When examined at the office one-half hour later, the palpebral and bulbar conjunctivae and cornea of the right eye were covered with a white eschar and appeared as if cooked. The bulbar conjunctivae of the left eye was hyperemic and congested, the cornea was not involved. Due to the marked irritation of the acid causing photophobia, lacrimation and blepharospasm, patient was temporarily blind in both eyes. Fortunately, the mild first degree burn of the left eye responded quickly to treatment and patient could see after a drop of 1 per cent cocaine had been instilled. The left eye appeared in good condition two days after accident.

The third degree burn of the right eye responded slowly to treatment. Visual acuity disappeared, only faint light perception remained. Sodium-bicarbonate, weak silver nitrate and atropine solutions were instilled into the eye several times during each day and the patient used liquid albolene every two hours at home. He was advised at the beginning of treatment

of the possibilities of loss of vision and loss of the eye. The prognosis was guarded.

The following complications developed. The white eschar sloughed and the corneal and conjunctival epithelium of the right eye was washed away as fine white threads. The denuded surfaces caused severe pain and blepharospasm. The lids were swollen and edematous. An eczema involving the external lower lid and face developed as the result of the marked lacrimation and irritating discharges. Ten days after accident a deep ulcer developed at the lower pole of the cornea near limbus associated with an iritis. These conditions gradually disappeared under treatment. The corneal ulcer healed, leaving a leucoma. Later, during the sixth week, a pseudo-pterygium developed in the area of leucoma which rapidly spread toward the center of the cornea and downward, connecting with a symblepharon posterius. The latter condition caused limitation of mobility of eyeball, trichiasis and entropion, while the former interfered with visual acuity. The upper and central parts of the cornea had cleared sufficiently at the end of the fifth week so that patient could read 20/150.

In order to relieve the above complications and to prevent blindness, a pseudo-pterygium and symblepharon operation was performed by D. W. Stevenson, assisted by the writer. The pseudo-pterygium and symblepharon were buried in the fornix and the denuded surfaces covered with epithelium.

This operation was only partially successful as the symblepharon recurred six weeks later. A second operation was performed, gutta percha was inserted, stitched and kept in place between lid and eyeball until cicatrization had taken place. This prevented the denuded surfaces from adhering and proved successful.

The patient was last examined seven months after accident. At this time had normal mobility of eyeball, the cornea had cleared sufficiently so that visual acuity was 20/25. A small leucoma still remained at lower pole of cornea. The corneal astigmatism resulting from the burn was corrected by a compound hyperopic astigmatic lens.

Case 2.—W. H., age 24, rubber worker. Family and personal histories negative. The present trouble commenced at his home while repairing his automobile, April 12, 1922. The motor was running when he uncapped one of the cells of the battery. The accumulated hydrogen gas, mixed with air, was ignited and exploded by a lighted pipe which he was smoking, throwing the sulphuric acid dilution into his face and eyes. The battery was examined by his father the following day. He found the small vents at the top of each cell occluded with detritus, which prevented the escape of hydrogen. The solution, tested by a hydrometer, had a specific gravity 1.275.

The conjunctival sacs were washed out immediately with cold water and ten minutes later at the office, sodium bicarbonate solution was instilled, neutralizing what acid remained. The corneal epithelium was denuded in the right eye. The conjunctival tissues of both eyes were hyperemic and remained so for four weeks. The patient returned to work ten days after accident. Except for the slight hyperemia, both eyes appeared in good condition.

Two weeks later, he returned to the office complaining of headaches and blurred vision in both eyes. Our records showed that the patient had been refracted 10 years previous and fitted with lenses, correcting the compound hyperopic astigmatism of the left eye and the slight hyperopia of the right eye. The patient wore these lenses six years. After graduating from high school he discarded them, doing his work at the factory without eye symptoms, until present trouble began. He was refracted a second time under a cycloplegic and fitted with glasses, correcting the compound hyperopic astigmatism of both eyes. The patient returned to the office one month later for adjusting of his lenses, which he had worn constantly. His eye symptoms had disappeared and his visuual acuity with lenses in either eye was 20/20.

Case 3.—F. S., male, age 23; apprentice automobile mechanic. Present trouble commenced April 14, 1922. He gave a similar history as case No. 1. He had a second degree burn of right eye with denuding of the corneal epithelium, associated with a mild first degree burn of the left eye. Due to the marked photophobia and lacrimation, patient was unable to see for a few hours following accident. An iritis developed in the right eye two days later, which persisted for ten days. Two weeks after accident he returned to his work. When last examined at the office two weeks later eyes appeared in good condition. His visual acuity was 20/20 in each eye.

Case 4—W. M., age 40, male, plumber. September 10, 1922, he was repairing and recharging his automobile wet celled battery at his home. Further history same as Case 1. When examined at the office 20 minutes after accident, both cornea were denuded of epithelium and the bulbar and palpebral conjunctivae were hyperemic. The patient was treated two weeks at the office. His visual acuity was 20/20 each eye when last examined.

Case 5.—F. A., male, age 25; apprentice automobile mechanic. He was examining recently charged wet celled storage batteries at an automobile storage battery company where he was employed, October 6, 1922. He had a lighted torch near an uncapped cell of a battery, a bubble of hydrogen gas exploded, throwing sulphuric acid dilution into his face and eyes. Upon examination at the office one-half hour after accident, the conjunctival tissues of both eyes were hyperemic. The corneas were not involved. The patient returned to his work ten days later. The visual acuity, when last examined, was 20/20 each eye.

Case 6.—J. R., age 20, male; college student, Lansing, Mich. On October 12, 1923, he held a lighted cigarette near an uncapped, recently charged, wet celled storage battery, which ignited and exploded the hydrogen gas mixed with air within the cells, throwing sulphuric acid dilution into both eyes. Fortunately, the burns were mild in type and the eyes appeared in good condition one week later.

The high explosive conbustibility of free hydrogen mixed with air in the presence of a burning torch, match, cigar, pipe or cigaret, or any other flame, as illustrated by the above case reports, is the important etiological factor in automobile battery burns and should be emphasized. Each wet celled battery used in connection with the self-starter in the greater majority of automobiles consist of zinc or lead plates or a combination of them immersed in an acid dilution. As a rule sulphuric acid diluted with distilled water is used. The electrolytic reaction between the plates and acid dilution liberates free hydrogen which in the form of a gas escapes through the small vents at the top of the battery. The chemical reaction is accellerated directly when the acid concentration is increased or when new plates are added and indirectly when the motor is running. The greater the chemical reaction, the greater quantity of

hydrogen is liberated. Thus, the greatest danger arises in examining a recently charged battery in the presence of a flame. Nevertheless, every automobile battery is potentially dangerous since the small vents at the top of the battery may become closed with detritus, allowing the gas to collect in the top of the cell. If the cells are uncapped in the presence of a flame either during or after the motor is in action, the accumulated gas mixed with air explodes, throwing the acid into the individual's face and eyes.

The nature of the burn at this time depends upon the concentration of acid dilution and the length of time the acid is in contact with the tissues of the eye. Weak sulphuric acid dilution produces as a rule hyperemia of the conjunctivae without loss of tissues, while stronger solutions if allowed to remain in contact with the tissues of the eye denude the corneal and conjunctival epithelium. Concentrated sulphuric acid produces deep subconjunctival necrosis, resulting in complications which vary according to the parts of the eye involved and the results of cicatrization.

Case one well illustrates the complications which may develop after concentrated sulphuric acid is splashed into the eye while case two shows a comparatively mild degree acid burn giving rise to corneal astigmatism in the right eye and stirring up a latent visual defect in the left eye.

It is evident that the prognosis in all acid burns of the eyes should be guarded, advising the patient at the beginning of treatment of the severity of acid burns, the complications that may develop and the indefinite length of time for treatment.

Moreover, a careful history and determination of the visual acuity, followed as soon as possible by an opthalmoscopic examination of the deeper structures of both eyes is important not only in determining the prognosis but also from industrial and medico-legal standpoints. The history and findings often determines and rules out some pathological condition or some visual defect which the patient has had some time previous to injury upon which he bases a claim for compensation.

As the degree of burn, too, depends upon the length of time the acid dilution is in contact with the tissues, early treatment is advised. The cul-de-sacs of both eyes should be washed immediately with cold water and the excess of acid neutralized with instillations of sodium-bicarbonate solution. Further treatment depends upon the degree of burn and the complication which may develop. Early operative procedure is not indicated unless the eyeball is partially or totally destroyed or sympathetic ophthalmia threatens. A bland oil dropped into the cul-de-sacs of one or both eyes every two hours at home relieves pain, aids in preventing denuded conjunctival surfaces from adhering and lessens the tendency toward symblepharon.

In conclusion attention is called to the prevalence of automobile battery burns of the eyes and methods devised whereby these burns can be prevented. Gradle recommends the remodeling of many of the wet celled batteries now used so that the dead space at the top of each cell of the battery is eliminated. This is important, but does not take care of the trouble entirely, as any wet celled battery will have a dead space at the top providing the acid dilution is down below the level of the plates. As all wet celled batteries are potentially dangerous, the following precautions in examining, repairing or recharging them should be taken.

(1) Keep all flames, including burning torches, matches, pipes, cigars or cigarets, away from the battery.

(2) Stop the motor, uncap each cell of the battery and allow accumulated hydrogen to escape, examine by illumination of a flash light, electric or sunlight.

(3) Keep the cells of the battery filled with distilled water.

(4) Keep small vents at top of each cell open and clean.

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CARCINOMA OF THE LARGE INTESTINE

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Ninety-eight of malignant tumors of the intestinal tract involve the large bowel. Over a large series of cases, the percentage of carcinoma is about three to one, male and female, and about three times as common in the descending colon and rectum as in the rest of the colon.

While rectal carcinomata are mostly prevalent between the ages of 40 and 55 years, they are also found very frequently in the young. Many cases have been reported under 20 years of age. Lonant collected sixty-one cases of carcinoma of the large intestine between the ages of 20 and 30 years[1].

About 60 per cent of the tumors of the large bowel involve the rectum, and over

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5 per cent of all cancers are of the intestinal origin.

ETIOLOGY

While the irritation of hemorrhoids, fistula, fissures and ulcer, may predispose to cancer on account of the irritation, it is questionable whether cancer is due directly to hemorrhoids. In our list of cases for the last fifteen years, we do not recall one case, where the history shows that the evidence was that the cancer began at the site of the hemorrhoids. Many operations have been performed for hemorrhoids when the patient had a well developed carcinoma, and we would not infer that there is any connection between the two, even when the carcinoma is of relatively slow growth. symptoms may be present two or three years before marked involvement, excepting in the mucous membrane of the bowel. From the experience of many observers, the incident of age is later in rectal carcinoma than in the colon. On account of rather frequent occurrence of carcinoma at the flexures, as the caecum, transverse, splenic flexure and sigmoid, it is possible that there may be histological changes which predispose to this disease.

TYPES

The carcinoma of the colon is usually of three types, with perhaps a number of variations. The most frequent type is the adenoma carcinoma which may be either medullary or stenosing fibro-carcinoma, and the occasional colloid carcinoma which usually involves the caecum and the squamous celled carcinoma or epitholeoma, involving the cutaneous border of the anus. The part of the bowel involved in order of frequency is the rectum, sigmoid, caecum and ascending colon, with the hepatic, splenic and descending portion about evenly divided. The malignant growths involving the left half of the colon and rectum, are more dangerous, both from the operative standpoint and metastases. This is due to three reasons. The more frequent and earlier involvement of the left side lymphatics with mestastases. Second, they are more difficult to remove from a surgical viewpoint on account of the restoration of the continuity of the intestinal tube, and third, the greater danger of infection following operation on the part of the intestinal tube having thick foecal masses. The squamous celled types, involving the lower two or three inches of the rectum are often very malignant and metastasis of the liver often takes place earlier, as well as matastasis in the inguinal lymphatics. There is much less bleeding from the stenosing fibro-carcinoma. Often stenosis takes place relatively early, and at times an operation can be satisfactorily performed even after complete obstruction, without there being involvement of only the adjacent lymphatics. This is especially true of carcinoma of the ascending and transverse colon. The medullary and papillary types are usually associated with more bleeding and more ulceration, and are much more dangerous than the annular growths.

A colloid carcinoma is relatively not nearly as malignant as the other types and is usually found in the region of the caecum and often causes marked obstruction and grave secondary anemia with the appearance of a large tumor mass, without early lymphatic involvement.

SYMPTOMS

The symptoms depend upon the type, position and extent of the growth, and in patients presenting themselves for examination the early symptoms of carcinoma of the bowel should be suspected and a thorough examination instituted, should the following symptoms be noted by the patient. Among the earliest symptoms of the usual carcinoma is irregularity of the bowel, either diarrhea or constipation. Constipation much more frequently than diarrhea, gas distress and a feeling of fullness in the bowell. Changes in the stool, from their normal characted, with pain or tenesmus. With growths involving the lower rectum, patients pass blood at times in about 50 per cent of the cases, even early in the disease. With the progress of the disease, added to the above, will be slight loss of weight, although this is a symptom which can never be relied upon, and can never be depended upon from the patient's standpoint, as many of them do not know whether they have lost weight or not before coming in for examination. To wait for this symptom of loss of weight in suspected carcinoma is to wait oftentimes until the patient is a hopeless case. Blood changes occur rather early in carcinoma of the large bowel, the blood should always be examined as a routine in examination of these patients, as well as stool examination for occult blood. Slight loss in hemoglobin with decrease of red blood cells are significant.

In some types, as in the stenosing fibro-carcinoma, the only symptoms may be gas distress and constipation. These symptoms are often continuous, but sometimes intermittent. These increase with the extension of the involvement and stenosis, a slight or total obstruction may occur, without any other clinical subjective symptom.

Pain as a symptom in carcinoma is often entirely absent with the exception as noted

above in growths involving the rectum, and as in carcinoma elsewhere, often denotes not so much malignancy as the extent of the malignancy and involvement of the other organs. In the papillary and medullary types, ulceration and bleeding are early symptoms; following the ulceration, infection occurs, which is usually the cause of the pain. Ulceration may occur at irreguular intervals, and great care must be made in examination of these patients as the symptoms may be practically absent during the quiescent period. In some cases when patients first present themselves, they may not have marked symptoms, excepting distress with gas, or a mild or grave secondary anemia. This anemia may be so marked, and while in other diseases might put them in the inoperable class, it is surprising to what degree of anemia patients may suffer and still successfully have a radical operation for the removal of cancer. Other symptoms are often total aversion to certain types of food.

EXAMINATION

A carefully taken and written clinical history will make the diagnosis in the majority of cases. In addition to the complete general examination, in which it is important that the patient should be examined several times and in suspected cases, examination had much better be made in the hospital, where patients may have the proper enemas as preparation and relief from distension. We include, beside the careful physical examination and blood examination, the rectal digital examination, which in 50 per cent or more of the cases of involvement of the rectum makes the diagnosis, without anything further. Careful examination of the stool for tissue and blood should always be made, especially after enemas.

In addition to the digital examination a carefully made protoscopic examination should be made, which is best made with the patient in the knee chest position, with the proper sized protoscope and a good light.

In addition to the above, the X-ray examination should never be omitted, for this type of examination we prefer to advise the barium enema, and it is best for the surgeon to accompany the patient to the X-ray Department and should examine with an expert Roentgenologist the fleuroscopic examination. It is extremely important for the physician to note this, as small lesions may be noted by this carefully made X-ray examination with the barium enema. Serial plates should be made as well as the fleuroscopic examination, and even after negative reports are made after the above procedures, they should all be repeated in every detail in two or three weeks after negative reports.

The mortality in this disease will be lessened when patients consult the examining physician early, and the painstaking care with examination is made.

DIFFERENTIAL DIAGNOSIS

There are not many conditions which are usually confused with carcinoma of the large bowel. Probably the first of these is diverticula of the sigmoid or descending colon. The history of pain in these cases, associated with inflammatory masses found by examination and shown to be outside of the lumen of the bowel by X-ray examination with the finding of diverticulae, with barium enema, is one way that this differential can be made. We must remember that carcinomas do develop on the site of diverticulae and many cases have been reported. Great care should be taken to make this differential diagnosis, by every possible means.

TUBERCULOSIS

Tuberculosis of the colon is not nearly as frequent as carcinoma, and is very infrequent after the age of 30 years, while carcinoma is very common. The diagnosis in tuberculosis of the colon, above the point where we would be able to obtain a specimen for examination is sometimes impossible to make. After all means of elimination have been made, it is always safest to consider the case one of carcinoma and treat accordingly until the court of the last resort, the pathological slide, informs us of the happy report, from the patient's standpoint that the tissue is tubercular and not carcinomatous.

SYPHILIS

Syphilis is very rare in the large bowel, with the exception of the lower three of four inches. We have the blood examination and tissue for examination with history of the disease in some cases. We must not forget however, that patients with positive blood Wassermanns and history of lues can have and often do have carcinoma of the colon and the fact that they have a history of lues should not allow them to die of carcinoma without other precautions being taken for an absolute diagnosis. Certainly, it is not proper to treat patients for lues more than two or three weeks in questionable lues and carcinoma without improvement. We are doubtful of there being any harm from taking a small specimen for microscopical examination, wherever such can be obtained through the protoscope.

TREATMENT

When treatment for carcinoma of the bowel is early, there can usually be radical removal by surgical means. The X-ray or Radium or any other form of treatment is not satisfactory in cases that are operable, unless used with the hope of destroying metastasis. We believe that time should not be lost before operation, after diagnosis is made, excepting to put the patient in as good condition as possible. This we do by blood transfusion if necessary, enemas and getting the bowel as clean as possible, and usually a preliminary colostomy. The length of time after colostomy, before radical operation is made would depend, of course, upon the condition of the patient and upon the position of the growth. A longer time would be necessary after colostomy before operations should be performed in carcinoma of the left colon than of the right or mid-colon. A week or ten days would usually be sufficient for either type. In carcinoma involving the hepatic and splenic flexures an dthe mid-colon, instead of performing preliminary colostomy, we believe that anastomosis between the ascending colon and descending colon would serve the same purpose and lessen the period of convalescence for the patient. The length of time after such anastamosis is made before advising the resection would depend upon the patient's condition entirely. Usually two or three weeks would be sufficient. We have been surprised what little shock and low mortality one has after advising these two stage operations, and in some cases even three stage operations. The type of operation would depend, of course, upon the location of the growth and its extent. It may be impossible to tell before the operation whether one can restore the continuity of the resected bowel, or whether it would be necessary to leave a permanent colostomy.

From the experiences of many surgeons it seems that if a permanent colostomy is to be made, it is better to make it in the inguinal region than in the perineal or the sacral region. If there is any suggestion about radical removal of the growth it would seem better to have the patient fully understand before the operation the fact that they may have to have a permanent colostomy. In some cases with a good deal of secondary inflammation, that are apparently inoperable, they will be greatly improved by deep X-ray treatment and preliminary colostomy. Many such patients will be able to have a radical operation only after these measures have been used. Whatever type of operation is used for resection, whenever possible end to end anastomosis should be used.

In carcinoma that can be removed through the rectum or by the combined recto-vaginal route, it had better be performed in this way. It is safest in most of the cases in the lower rectum, especially the squamous celled type to make preliminary abdominal incision for exploration of the liver, as the liver is often involved in the early squamous celled carcinomas. This examination should be made at the time of the first stage, pre-operative colostomy.

With growths which involve only the mucous membrane, it is quite surprising, with proper technique, the amount of rectum which can be brought down through the perineal region, and the spincter be restored so that the patient is very comfortable afterwards.

Probably the most difficult types of operation are the cases that are a little too high and extensive for removal by the perineal route, or too deeply situated to be easier removed by the abdominal route. This is the type of case, that it would probably be safest to get well below the growth and make a permanent colostomy if necessary, rather than to attempt to bring together the bowel under great tension. The rubber tube operation, where the approximal segment of the bowel is brought through and a rubber tube is brought out through the rectum and the lower part of the distal extremity joined to the proximal over the rubber tube, is quite satisfactory in a certain number of cases.

Probably the most satisfactory operation for growths involving the sigmoid would be the Tuttle type of operation, where the entire carcinomatous growth is brought outside the wound, after the distal and proximal arms are united with cat-gut, and after a few days the entire carcinomatous mass is removed with cautery the two ends of the bowel which stick up like a double barrel gun are pushed back after cutting through with the forcep which is applied to the joint loops after about 48 hours, at which time it usually cuts through. After two or three weeks after this procedure, a slight plastic operation might be performed and the continuity of the bowel re-established. It is a very safe type of operation, especially with extensive growths, that have extended through the wall of the bowel.

COMPLICATIONS

If great care is used, there are very few complications in operating for cancer of the colon, which might not arise in any major operation. At times it will be found necessary to remove a portion of the bladder,

and at times it will be necessary to perform Hysterectomy, both of which operations may be performed safely in extensive radical operations, but it is very important that whatever type of operation is performed that proper mobilization be obtained, as it makes the operation much easier, in fact, with proper mobilization many operations can be successfully and safely performed, which otherwise would be impossible. The incision should be properly placed to make the operation as easy as possible, and we believe, that the colostomy which should be made whenever possible, in the left rectus and that the three or four inches of the proximal colon be left as a loop, and this will give the patient a fairly good control of the bowel, in cases where it is necessary to make a permanent colostomy. The patient can be taught in many cases to take an enema through the colostomy wound in the morning and sometimes at night, and be entirely free from any foecal discharge through the day.

The danger of peritonitis, which has been a formidable one, and which was the complication we dreaded most in these operations on the large bowel, is practically eliminated by the use of two or three stage operation. Patients should be brought in as good condition as possible for operation. In addition to the proper colostomy, blood transfusions in some cases, and the building up by rest and by forced fluids, as much as possible. Many of these patients will need proper oral prophalactic treatment, and oftentimes extraction of carius teeth, all of which should be looked after to put the patient in as good condition as possible in a few weeks after his operation. Convalescence is often interrupted in patients with cancer of this type by their being unable to chew their food properly.

MORTALITY

The mortality in our own cases and in many clinics is from 10 to 15 per cent. This is not a high mortality, considering the condition of the patients, and will be reduced by earlier diagnosis, and the earlier presentation of patients for operation. If there seems to be even a small chance of the patient withstanding operation successfully, we believe that they should be given this chance, because without such radical operation they will die a miserable cancer death. There is no known treatment for cancer of the large bowel excepting radical operation and removal of the cancer aided in some cases by pre-operative and post operative X-ray and radium. Neither of these agencies should be used to the exclusion of surgery unless the case is inoperable.

As has been stated above, we have been surprised that after proper colostomy, and suitable X-ray treatments cases that were apparently inoperable become operable. It is very important in such a formidable operation as resection of the colon for cancer, that the surgical team work be at its best. This will include, beside careful pre-operative treatment, a carefully chosen anesthetic, which usually should not be ether, but should be ethelyne gas or nitrous oxide and oxygen, combined with local anesthesia. Great care should be used that there may be no unnecessary loss of blood during the operation, and the highest grade of surgical technique is necessary for the best results. The greatest care must also be used to protect the edges of the wound against unnecessary contamination. Several layers of saline packs should be used to prevent such contamination, and the segment of the bowel should always be removed with cautery. When a patient's condition is dangerous, after a very radical operation, it would be much better to discontinue the operation after removal of the growth, and do whatever anastamosis is necessary at a later operation. It is very beneficial to the patient to give them warm saline solution, either intravenously or subcutaneously, while they are on the operating table. After the operation they should have this continued and two or three hundred cc's every two or three hours, for twenty-four hours or until their condition is satisfactory. The lack of such careful postoperative treatment is oftentimes a deciding factor against the patient's recovery.

We believe that fairly full doses of morphine are a great adjunct to the operation of this type, given both pre-operatively and post-operatively. One of the greatest factors in reducing the mortality in this operation is the two or three stage operation, especially after ethelyne gas or nitrous oxide and oxygen have been used as anesthesia, will be that the patient can be given fluids or even light soft diet within twenty-four hours after the operation, and can have the nourishment which he so much needs, while it would be impossible or inadvisable to give him forced feeding after a one stage operation. Another factor which we cannot lay too much stress upon is that in the two- or three stage operation the danger of infection is practically eliminated.

SUMMARY

Early diagnosis, and early radical treatment will prevent the high mortality incident upon cancer of the large bowel, and multiple stage operation will reduce the

mortality from 15 to 30 per cent to from 5 to 10 per cent.

Proper pre-operative treatment which may include an X-ray treatment may change an inoperable case to an operable one, and though radical operation should always be performed even if permanent artificial anus is necessary. An attempt should not be made to restore the continuity of the bowel unless it can be done without too much tension. No abdominal operation should be performed for cancer of the large bowel without a careful examination of the liver and adjoining lymphatics, which may determine its operability. Many cases of apparently inoperable cancer may be operated upon safely by proper blood transfusions and preliminary colostomy. Sufficient time should elapse after the first stage operation, before the second stage is attempted in some cases a month or more may be advisable.

FOUR ILLUSTRATIVE CASES

Mr. C., age 40. Operated 1923. History of one year of symptoms. Large colloid carcinoma, involving 6″ of caecum. Patient had a secondary anemia with 2,000,000 red cells. A preliminary enterostomy was made, using the terminal ileum, and after three weeks the ascending colon was resected and anastamosis of the ileum to the hepatic flexure. Patient made an uneventful recovery, and was well for over two years. He then developed metastasis of the liver, and died about three months after metastasis was noted. Patient was well for over two years.

Mr. L., age 56. Sent in as an emergency operation, with complete bowel obstruction, which had been present for over 36 hours. Colostomy made as emergency, using the colostomy on the right side. Four weeks later a large adenoma carcinoma, which had caused complete obstruction of the lower portion of the sigmoid, was resected by the abdominal route, Tuttle type of operation.

About two months later the colostomy was closed, and a plastic operation performed on the colon with restoration of the lumen. Patient has gained 40 pounds in weight, and is apparently well, after 16 months. History of cancer had existed over eight months before examination, under care of an osteopath.

Mrs. K., age 24. Operated in May, 1922, for a large medullary carcinoma of the sigmoid. Preliminary left side colostomy was performed. One month later we removed a large medullary carcinoma by combined abdominal, vaginal-rectal route. Although this was one of the most malignant tumors we have seen, and the patient 24 years of age, she seemed in perfect health when she was examined in March, 1924, with no evidence of disease.

Mr. E. S., June 21, 1921, age 30. History of colitis, three years' duration. Bloody mucous stools, secondary anemia, resection of sigmoid, and to end anastomosis, tube method, tube removed four days later. Patient was examined about two months ago, and there was no apparent evidence of disease.

In practically all of our series of cases of cancer, extending over 15 years, most of the patients had had symptoms of cancer for from five to eighteen months before operation.

(1) Ewing.

THE TRAUMATIC NEUROSES AND THEIR RELATION TO THE SURGEON

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In presenting this subject before a group of surgeons, it is our desire to bring to your attention a phase of the question which is not ordinarily discussed. It is the prevention of the condition which we feel has not been sufficiently emphasized in the past. Inasmuch as the surgeon is the one to whom the majority of these cases are first entrusted for care, it is he who has the first opportunity in prevention.

Erichsen[1], in 1876, first connected trauma with the development of a neurosis, but in doing so he did not use the word traumatic, this term being introduuced by Oppenheim[2] in 1884. Oppenheim's conception of this disturbance was that we were dealing with an organic nervous disease brought on by concussion either directly affecting the central nervous system or being conveyed to the brain by the sensory nerves. However, he admits that the symptoms are in many points identical with the neuroses and psychoses, especially hysteria, neurasthenia, hypochondria and combinations of these. As late as 1915, he again brought out the idea that after trauma, there is a definite disturbance of the normal functioning of the nerve cell which may occur without hemorrhage, inflammation or degeneration and which could be explained as a molecular displacement or disturbance of associated functioning parts. This recent work was on war neuroses.

Among recent work of Americans on this subject, Osnato's[3] has attracted considerable attention. He divides the functional nervous reactions to injury into two groups, viz: traumatic neurosis and traumatic hysteria.

In brief, he believes that a true case of traumatic neurosis will not show any of the true hysterical stigmata, but that its symptoms are due to fear with immediate injury to the nervous system. It is his opinion that most of the traumatic neurosis cases are in fundamentally normal individuals, the injury being entirely responsible for their symptoms; while with the traumatic hysteria, he was dealing with individuals who were making an instinctive maladjustment and who are inferior both mentally and physically. The important fact remains, that regardless of his efforts at classification, the recoveries were practically 100 per cent after compensation claims had been settled. But one case in 23 of the traumatic neurosis group had not recovered,

while the group of 22 traumatic hysterias had completely recovered. A settlement, then, is the most important factor in the establishment of a cure.

Horn's[4] figures would lead one to the same concluusion and he believes "that the prognosis is better in settled than in unsettled cases. This agrees with the opinion of Wimmer of Denmark, Nageli of Switzerland, and Billstrom of Sweden." Horn reported 86 per cent of cures following settlement as compared with 6 per cent in cases still receiving compensation. Moyer[5], Hoag[6], Bailey[7,8], and Cotton[9] and others are agreed that ideagenous factors are fundamental in the cause of the disease. Mayer believes that in traumatic neurosis we are dealing with a disease which is brought on by an "acute stoppage of cerebral activity following trauma, not necessarily structural in origin, but of such a degree that the individual cannot adjust himself to it and this brings on emotional reactions and their motor responses." He believes "that in case of inability to adjust, a disturbance of the endocrines is begun and thus a vicious circle is established."

Since the passage of the Federal Compensation Law in 1911, the economic phase of this question has increased in importance yearly. According to Mitchell and Cobb[10], "only three states are now without a modern compensation law" and "nearly all states have established either Industrial Accident Boards or Compensation Commissions which handle all doubtful cases without bringing them into court, although the law usually permits court action if the patient so desires." The economic loss cannot be considered wholly as a vast amount of money spent yearly on these individuals in compensation, but the loss in production brought about by their incapacitation is equally important. We have no method of determining what percentage of the total number of accident cases have or develop nervous symptoms and therefore no accurate method of knowing the cost of traumatic neuroses to society. We do know, however, that the majority of traumatic neuroses cases are not brought to the attention of the Compensation Boards as early as they should be. This inattention is usually due to the want of a definite diagnosis and the fear on the part of the insurance companies and employers that the compensation board, which sometimes has no doctors as members, will not understand the cause of the condition. Certain of the larger insurance companies have taken a forward step in regard to prophylactic measures in traumatic neuroses. Their plan is to provide consultation boards, which shall consist of a chief, (usually a surgeon) and associates who represent the various specialties in medicine. The services of this board are placed at the disposal of the attending surgeon, through the aid of the insurance companies, as soon as possible following the injury. Consultations are encouraged early in the patient's illness.

We have been strongly impressed in our observation of these cases, that in their establisment much depended on the first physician called to attend the case. As a preliminary statement to our remarks on the cause of traumatic neuroses, we are of the opinion that the disease is essentially ideagenous, and we agree with others who state that in the majority of instances the disturbance takes place in the constitutionally inferior type of nervous system. If one is painstaking enough to obtain a detailed history and to analyze the patient's situation, he will find that his illness provides for him a temporary avenue of escape from previous unpleasant situations. However, we thoroughly agree with Mitchell and Cobb in their statement that "it is impossible to draw the line between consciously planned malingering and an emotional exaggeration of symptoms."

During the last year, one of us (F. P. C.) has seen 14 cases of traumatic neurosis which were being cared for under the Compensation act. There were 13 males and 1 female and their average age was 47 years. With the exception of two cases none of them had been given a previous neurological examination. The average period that had elapsed since their injury was 18 months. The shortest period since development was one week and the longest 8 years.

It is interesting in this connection, that in the two cases of shortest duration (1 week and 3 weeks) both were induced to go back to work, with the result that their symptoms disappeared entirely. The same result was accomplished in two other cases, one of 10 months standing and the other of 13 months. We thoroughly agree with others who have investigated this phase of the question that perhaps the most important point in preventing the establishment of a traumatic neurosis is to avoid delay in the neurological examination of the case. The patients, as a whole, detect any attitude of indecision on the part of the attending physician, and should he be so unwise as to voice any of his doubts or fears, he only sows the seed of future trouble for everyone concerned.

The fear associated with the occurrence of the accident may be the nucleus around which is built a chain of nervous symptoms.

This was well illustrated in the cases of two structural steel workers whose ages were 28 and 35 years. Both had symptoms of anxiety, such as dizziness, sweating, tremors, pains, palpitation, and increased emotional reaction. Both of these men had fallen from a height of about 35 feet and both had a constant fear of going back to his former occupation, one to such an extent that he admitted being awakened every night by dreaming of falling. Neither of them could earn one-half of their former salary at any other occupation and one of them expressed the wish of a lump settlement in order to establish an independent business. We admit the difficulty of preventing cases of this type, but on the other hand the condition is only aggravated by allowing them to continue without a diagnosis and an attempt at setltement.

In five cases, whose ages were 66, 64, 50, 66, and 58 years, no occupation other than that of laborer was given and in all of these except the case of 50 years of age, the patients complained of some symptoms which could reasonably be referred to arteriosclerotic changes. The symptoms which they associated directly with their accidents, however, were hysterical, and in the case, age 50, although having clear cut stigmata of hysteria, one strongly suspected him of malingering. He was a quarrelsome, irritable type and constantly referred to the possibility of consulting his lawyer when anything occurred to irritate him. His case was finally disposed of by a lump sum settlement. Ordinarily, one does not suspect people whose ages are in the neighborhood of 60 years, of being hysterical, but in this type of trouble, it is well to be constantly aware of its possibility.

One of the five cases mentioned above, had been examined by 13 different doctors and he took considerable pride in the statement that "none of them knew what was wrong with him." However, each one had an opinion which the patient could quote verbatim. Following each of the examinations of the last three doctors, the patient would be in such severe pain that he would be confined to bed for a few days. All of this would occur in spite of the fact that he was previously able to walk around and regardless of the utmost care used by the examining physician.

In one of the three remaining cases, the patient, a foreman of 52, was hit on the head by a small elevator gate. The injury gave him a considerable fright, but did not render him unconscious. Four days later he went to the doctor for the first time and complained of dizziness, weakness, and headache. An organic brain injury was immediately suspected by his physician and he was examined with that in view, but the examination was organically negative. Four months later, he was given a neurological examination and a diagnosis of traumatic neurosis made. This patient is still drawing compensation and is no better symptomatically than when first seen. Previous to the accident he had numerous conflicts with the men in authority where he worked and later on admitted a fear for the success of the outcome of the concern.

To illustrate the point that the accident is sometimes ascribed as the sole cause of the patient's symptoms, when, as a matter of fact, a series of circumstances preceding the accident are quite as responsible, we wish to relate briefly the last two cases. The first, a female, age 37, had fallen down a stairway and sprained her ankle. She states that the first attending physician thought it "the worst sprain he had ever seen." She, at the time of the neurological examination, had been confined to bed for over six months, claiming inability to walk. Her neurological examination revealed many stigmata of hysteria in regard to the complaints. This patient had been divorced from her husband five years previously and at the present time she was aware of the fact that he was engaged to another woman. Although she claimed to have contracted Lues from him during their married life, she admitted that she still cared for him to the extent of being willing to reconcilliate. Since her divorce she had been forced to work away from home in order to support her two children. The neurosis in this case was due to a long series of sexual and domestic difficulties, the accident furnishing for her a temporary refuge from an unpleasant situation as well as an appeal for sympathy from those responsible for her situation. The second case in point was that of a railroad engineer, age 60 years, who two years previously had missed a step in getting off his train and jarred himself considerably. About ten days later, he went to his doctor complaining of pains in the sacral region and down his legs. After a thorough examination, they found "nothing wrong with him organically." One year after the accident the patient accepted a check as complete payment for his injury. The railroad company had written him and conversed with him many times previous to the acceptance of the check and as he stated, "the whole business worried and annoyed him." And now one year after the lump sum settlement has been made, although improved, he is still complaining of neurasthenic

symptoms such as: weakness, pains in his extremities after exertion, tender spots, occipital headaches, hyper-emotionalism, etc. The patient had no stigmata of hysteria. On further inquiry, we find that he has been a type who always repressed his emotions to the limit and took pride in his calm attitude in trying situations. During the previous two years, while driving his engine, he had hit five different automobiles and people had been killed in every accident but one. All this had produced a severe shock and strain on a tired nervous system and even though his run was but four hours long, he would go home at night complaining of occipital headaches. We feel that the accident, which the patient held responsible for his trouble, was but an incidental factor in his neurosis. A neurasthenia may have and usually does have its beginning before the accident which merely serves to ignite a number of smouldering symptoms.

Although this series of cases is too small to furnish definite conclusions as to the etiology of this disease, nevertheless it has given us some ideas which may be of service in its prevention. One of us (R. H. D.) in treating over 14,000 cases of accidental injury, including every type from a contused finger to a compound fracture of the skull, has not had develop and continue to a compensation status, a single case of traumatic neurosis. All of these cases were cared for under the Employer's Liability Act. There are no available records showing the incidence of traumatic neuroses in the total number of accidental injuries, although Dana[11] reports that in 2,500,000 accidents in New York, 15 per cent complained of nervous symptoms. In view of this fact we believe tha the non-occurrence of traumatic neuroses among our cases could scarcely be considered a mere chance.

It is our opinion, as we have stated before, that the traumatic neuroses are essentially ideational. We believe that there is no definite demonstrable pathology in the nervous system, but that the trauma serves as the primary suggestion around which the disease is finally established.

We have at all times kept in mind the fact that this condition develops in individuals who possess a constitutionally inferior nervous system; that the sum total of the patient's past experiences, together with his environmental condition at the time of the accident may enter as factors in the cause of the disease. After the accident numerous factors may occur which aggravate and tend to fix the disease upon the individual.

The surgeon can have no influence on the patient's constitutionally constructed nervous system. He cannot control the past experiences of the patient, nor the environmental condition at time of accident, but those circumstances following the trauma which are the circumstances that fix the disease upon the individual, can be materially controlled. We offer the following suggestions:

1. One should never appear alarmed over the condition of the patient and whatever remarks one makes should be reassuring. The fewer made the better.

2. Do not mention the possibility of protracted disability or complication. This will furnish him further ideas to fix the disease.

3. Always minimize rather than magnify the seriousness or severity of the injury, at the same time give him a careful and complete examination. In this examination don't give him the impression that you fear he had a skull fracture or some serious injury, but impress him with the fact that the steps of your examination are routine.

4. If there is doubt as to the diagnosis on the part of either the examining surgeon or patient, competent counsel should be called immediately, for any doubt on the part of physicians is multiplied many times in the mind of the patient.

5. In prognosing a case the family and the patient should be given the same information, otherwise ideas of uncertainty and fear will enter the case. These ideas are the seeds of a future neurosis.

6. It is difficult to prevent suggestions by sympathetic friends and unscrupulous lawyers, factors which often play no mean part in the development of the condition and which, when it is developed, aggravate it. To prevent this, extreme measures are sometimes necessary, such as confinement in hospital and the exclusion of all visitors.

7. Probably the most important factor is to get the patient back at work immediately his injury will permit. There is probably no factor so important as occupying the patient's mind with wholesome things and thereby crowding out memories of his accident and other unpleasant matters, and reestablishing him upon an earning basis. It is well in a patient of this type to prevent his entering upon an indefinite compensation program, for the weekly payment of a sum of money will constantly keep unhealthy thoughts before the patient's mind.

The neuroses will occur, but if they are recognized early and dealt with early, they will be much more easily handled than after they have become fixed upon the patient. The above statement applies as well to the

traumatic neuroses following surgery in which no compensation is involved. We have purposely avoided discussion of that field in this paper.

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GIARDIA INTESTINALIS

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The finding of many cases of Giardia intestinalis during and since the Great War has led to a great deal of study of this flagellate in attempting to determine whether it is pathogenic to man, and if possible to find some specific treatment.

This protozoan was described by Lambl in 1859 and was called Lamblia intestinalis by him and is still by many physicians given this name, though Grassi contributed most of our early knowledge to this organism. In recent years, especially in America, it has been more frequently called Giardia intestinalis.

The flora of the intestinal tract varies considerably in numbers and also in variety, and the many reports of the non-pathogenic bacteria and the study of these in attempting to change the flora from a large percentage of putrefactive to that in which the fermentative bacteria will predominate, has led to much more thorough study of fecal specimens and has brought to light many cases in which the formerly so-called non-pathogenic bacteria, such as the Lamblia intestinalis and Trichomonas intestinalis, were found but apparently producing no symptoms. The same condition was also brought out by the study of the stools of a large number of soldiers, both those stationed in tropical countries and those invalided home for various conditions but especially for chronic dysentery. In Flanders, Salonica, and other regions where many foreign troops were stationed during the war, the parasitic intestinal affections have become more or less prevalent.

In support of the belief of many whose studies without a doubt prove that Giardia intestinalis is at least pathogenic for some individuals, the work of the following men would seem quite convincing:

Yakomoff[1] and his coworkers found Giardia as the undoubted cause of many cases of dysentery in their work in the Caucasus. Fantham and Porter[2] and Kennedy and Rosenwarne[3] encountered a number of cases in which only Giardia was found in dysentery cases in soldiers returned to England from Gallipoli. This same group of workers also found a similar condition in a number of cases sent back to England base hospitals from France. Deglos[4] has encountered a number of cases in which he could find no cause for their dysentery other than the Giardia. Stitt[5], through his chance for wide study as a naval officer, states, "Giardia intestinalis is responsible for an intractable diarrhea, an infection only minor in importance to amoebic dysentery." Deschiens[6] in some of the most recent reviews of the work along this line in France, states that of all the cases of diarrhea and other intestinal affections, 3 to 5 per cent are due to Lamblia.

In spite of the fact that quite convincing proof of the pathogenicity of Giardia has been brought out, some still consider them non-pathogenic because the parasite is harbored by many apparently healthy individuals and are causing no symptoms.

Kofoid[7] and Kornhauser and Plate's[8] investigations of 15,000 soldiers, 300 of whom had never been outside of the United States, found 6 per cent infected with Giardia. Hegner and Payne[9] in combining the results of various investigations in England, France, and the United States, of the civilian population at large, the non-dysenteric soldiers and the soldiers who had never been outside of the United States, found 12 per cent infected with Giardia. Wenyon and O'Connor[10] in investigating the healthy British troops in Egypt found Giardia in 6.8 per cent. Reporting on routine stool examinations, Sanford and Logan[20], at the Mayo Clinic, found Giardia in 1 per cent in 6,000 examinations, Smithies[16], at the Augustana Hospital, .5 per cent in 1,000 examinations, and Tsuchiya, at the Battle Creek Sanitarium, .3 per cent in 2,000 examinations. Maxcy[11], at Johns Hopkins, in the examination of 89 children under 12 years of age, reports one out of every five infected with Giardia.

In England, Nutt[12] found 23.9 per cent

of the children in Leeds General Infirmary and 48.8 per cent in the Workhouse carrying this protozoan. Matthews and Smith[13], working in the Liverpool Royal Infirmary, found 14 per cent of 548 children infected in the examination of single stool specimens per case. Some investigators say that children as young as three months harbor the Giardia, but most writers on the subject have rarely found the infection under one year. The summary of the studies of these workers shows the condition more prevalent in children than in adults and would indicate the Giardia a frequent rather than a rare condition in the temperate zone. It is the commonness of the infection, without the production of symptoms in many cases, that lead some authors to contend that the Giardia is non-pathogenic.

In recent years, since the duodenobiliary drainage has become more common, cases have been found in which the stools have not revealed any protozoan. As the duodenum and jejenum are the natural habitat of the Giardia, the work in the near future will no doubt bring to light many more cases, as the frequency of duodenal drainage becomes more prevalent. Hollander[14], in performing drainages on 170 patients, found nine cases of infection by Giardia. None of his patients had ever been in tropical countries but had been residing in New York for many years. Boyd[15] reports some interesting work along this line from the Winnipeg General Hospital. Smithies[16] states that the Giardia may lodge in the gall-bladder and cystic ducts.

In the five cases which have come under my observation during the past year, four were found by stool examination and one by examination of the duodenobiliary drainage specimens. In two of these cases, dysentery was the chief symptom and in each of these two cases Trichomonas intestinalis were also present in large numbers. The other three cases gave a history of intestinal stasis. In one case in which repeated stool examinations showed the Giardia, four consecutive duodenobiliary drainages failed to reveal this protozoan. The case found by duodenobiliary drainage was a neurotic young man of thirty-four years of age who gave a history of paresthesias and vague indefinable symptoms which largely disappeared following treatment. Suggestion, and the patient's belief that this was his main source of trouble, may have been a factor in his relief.

As the protozoan soon loses its motility when cold, stool examinations, and also examinations of duodenal contents, must be made on fresh warm specimens, under high power, where both the protozoan and encysted forms may be found. Most writers are of the opinion that the patient should be on a liquid diet for thirty-six hours preceding the stool examination, and on reporting at the office should be given one ounce of magnesium sulphate or 500 cubic centimeters of Citrate of Magnesia, and that the first stool resulting from this purge be disregarded, the second being examined immediately. Boyd[15] brings out the fact that on examination of the duodenal specimens, many motile protozoan may be found one day, while examination the following day may reveal very few, if any, protozoan either motile or encysted forms, due to the fact that the magnesium sulphate used in these drainages seems to literally blow the protozoa to pieces and only fragments, if any remnants at all of the flagellate, are found.

The treatment as described by different writers is varied and the results reported are in many cases vague and unsatisfactory. Those who have tried out the long list of common anthelmintics have met with little success. Some have given quite glowing reports, but investigation has proved that the cases were not sufficiently studied and the data inaccurate. It would seem so far that no one remedy is effective but that combinations of treatments are the most successful. However, Carr and Chandler[17] report a case where three injections of .6 grams of Neo-Arsphenamine at five-day intervals apparently cured the condition, as studies of the stools after a period of months failed to reveal the recurrence of the infection.

Yakomoff and his workers were successful in freeing laboratory animals of the infection by intravenous injection of Arsphenamine. Kofoid and his associates were able to free the laboratory animals by single injections of Arsenobenzol when given in several times the proportionate dose as estimated by the body weight of the animal. Deschiens states that Giardia resists treatment with emetine and Neosalvarsan which will, however, eradicate amoeba and Trichomonas if coincidental infection exists, but that the daily dose of six grams of sulphur mixed with honey employed continuously for six months had proven satisfactory in eradicating this flagellate in his cases. Hollander[14] reports treatment of three cases. One patient received three duodenal lavages of magnesium sulphate and three injections of .45 grams of Neo-Arsphenamine, taken on alternate days, and was free from infection up to six months after treatment. Two other cases which were treated with three

injections of Neo-Arsphenamine without the duodenal lavage showed Giardia present in duodenal examination nineteen days or more later. Simon[19] reports the disappearance of the infection from the stools in several cases after a number of injections of Arsphenamine but has failed to give the data of his later observations of his treated cases.

Of the five cases (all males) which I have had under observation, four were treated, but only in two cases have sufficient time elapsed and satisfactory observations been made to justify the belief that a cure was effected. No protozoan was found either in the duodenal drainage or normal stool specimens. It is very interesting to note that in one case an achylia gastrica existed and it was thought that the diarrhea possibly was of gastrogenic type, but it failed to clear up after hydrochloric acid was administered. The infection was not found until the fourth stool examination when not only the Lamblia were found but also the amoeba associated with them. This patient was a merchant sixty-six years of age from Ohio. He was given twelve injections of 1.5 grains each of emetine and four intravenouus injections of .6 grams each of Neo-Arsphenamine. The dysentery was relieved. No duodenal specimen could be obtained. Numerous stools were negative for Lamblia or for the cysts, immediately following the treatment and also five months later.

The second case was a contractor, forty-nine years old, from Illinois. The diagnosis made in this case was Intestinal Stasis and Neurocirculatory Asthenia. The infection was found in the second warm stool examination and associated with it was a Trichomonas intestinalis. He was given six Alcrestin (ipecac) tablets daily and four intravenous injections of .6 grams each of Neo-Arsphenamine. Two stools as the result of a purge were negative two days following the treatment.

The third case was a physician, fifty-eight years of age, from Colorado. Six months previous to coming under our care he had six intravenous injections of Neo-Arsphenamine and had used emetine in ¾ to 1.5 grain doses daily for a week and Alcrestin 20 to 30 grains daily the following week. He had alternated this way for several months. The infection was found in the third stool examination but no protozoan in the duodenobiliary drainage specimen. He was given six injections of .6 grams each Neosalvarsan and two stools on two consecutive days following the last injection were negative although cysts were found after the fourth injection. The dysentery disappeared.

The fourth case was a printer thirty-four years of age, from West Virginia, whose case was diagnosed Intestinal Stasis and Neurasthenia with Anxiety. The infection was found in the fifth stool examination and also in the duodenobiliary drainage specimen. He was given four injections of 6 grams each Neo-Arsphenamine and three warm stool specimens were negative following this. Six months later no protozoan either in the stool or duodenobilary specimen was found. We appreciate that two of these cases have not been sufficiently followed, but they were from distant points and so far opportunity for re-examination has not been presented.

CONCLUSIONS

1. Giardia intestinalis is not an uncommon infection and merits more intensive study of its pathogenic relations.
2. This infection, according to the literature, is much more common in children than in adults.
3. Satisfactory study cannot be made in sanitariums or other institutions where patients are from distant points unless opportunity for examination at intervals for six months following treatment can be arranged.
4. Successful study of these cases must include both specimens obtained by duodenobiliary drainage and numerous warm stool specimens obtained at regular intervals following treatment.
5. Warm stool specimens should be examined in all cases where there is a history of chronic or recurrent diarrhea.

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COMMITTEE'S DRAFT PROPOSED NEW CONSTITUTION AND BY-LAWS

(To be presented for adoption by the House of Delegates at the Annual Meeting, Mt. Clemens, Sept. 1924).

Delegates and members are requested to familiarize themselves with the provisions herein contained:

Frederick C. Warnshuis, Secretary,
Powers Theatre Building,
Grand Rapids, Mich.

Dear Doctor: The Committee on Revision of the Constitution and By-Laws submits the inclosed Constitution and By-Laws.

This is the result of much study of similar works by several other states, as well as the existing articles under which we work. The Constitution and By-Laws proposed and published in our Journal in May, 1922, has been used considerably. Your committee has advised with others who are interested also.

We would call your attention to certain important changes which have been made in this work and believe you should mention them, especially when they are published, so that the members of the State Society would not overlook them.

The duties of the officers and committees have been more fully outlined.

The nomination and the election of the President is from the floor of the General Meeting instead of the House of Delegates. After all, the executive powers of the President are limited and in his election the State Society is conferring its greatest honor on a deserving member, rather selecting a helmsman. Such an honor can only be properly conferred at a General Meeting.

Nominations for Councillors are made from the respective districts they will represent. This meets a demand that the Councillors be chosen by those who know them best and that they be more truly representative.

It is also proposed that the dues be raised to $10.00 per annum instead of $5.00 as at present. At this, it is less than physicians pay to other organizations to which they belong and which often do not mean so much to them. If our State Society is to carry on any worthy program at all it must have funds, and 83.3 cents a month from each member is little enough to pay for the benefit they will receive.

We hope the Constitution and By-Laws meet with approval.

Sincerely,
J. G. Manwaring,
Chairman.

CONSTITUTION OF THE MICHIGAN STATE MEDICAL SOCIETY

ARTICLE I.—NAME OF THE SOCIETY

The name or title of this organization shall be the Michigan State Medical Society.

ARTICLE II.—PURPOSES OF THE SOCIETY

The purpose of this Society shall be to federate and to bring into one compact organization the entire medical profession of the State of Michigan and to unite with similar Societies in other States to form the American Medical Association; with a view to the extension of medical knowledge, and to the advancement of medical science; to the elevation of the standard of medical education, and to the enactment and enforcement of just medical laws; to the promotion of friendly intercourse among physicians, and to the guarding and fostering of their material interests; and to the enlightenment and direction of public opinion in regard to the great problems of scientific medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life.

ARTICLE III.—COMPONENT MEDICAL SOCIETIES

Section 1. The terms, County Medical Society and component County Medical Society shall be deemed to include all County Medical Societies now in affiliation with this Society, or which may hereafter be organized and chartered by the House of Delegates.

Sec. 2. There shall be but one County Medical Society in each county affiliated with this Society.

Sec. 3. If there should be an insufficient number of physicians and surgeons in any of the counties of this state to form themselves into a Medical Society agreeable to law, such physicians may become members of the component County Medical Society of an adjoining county when eligible according to the Constitution and By-Laws of such Society of such adjoining county.

ARTICLE IV.—COMPOSITION OF THE SOCIETY

Sec. 1. This Society shall consist of members, delegates and honorary members.

Sec. 2. The membership of this Society shall consist of citizens of the United States, members in good standing in the component County Medical Societies whose annual assessments in this Society have been paid. This, however, shall not be construed to exclude from active membership any physician who may occupy a teaching position with any college or university within this state.

Sec. 3. Delegates. The delegates shall be those members who are elected in accordance with this Constitution and By-Laws to represent their respective component County Societies in the House of Delegates of this Society.

Sec. 4. Each member in attendance at the annual session of this Society shall enter his name on a registration blank, indicating the component County Medical Society of which he is a member. When his right to membership has been verified by the official roster of this Society, he shall have a right to all the privileges of membership at that session. No member shall take part in any of the proceedings of the annual session until he has complied with the provisions of this section.

Sec. 5. Any person who is under sentence of suspension or expulsion from a component County Medical Society or whose name has been dropped from its roll of members shall not be entitled to any of the rights or benefits of this Society, nor shall he be permitted to take part in any of its proceedings until he has been relieved of such disability.

Sec. 6. Delegates to this Society from any State Society entitled to representation in the American Medical Association shall, by presenting certificates of delegation duly signed, be entitled to seats and to participate in the scientific business of this Society. They shall not be entitled to vote, nor to hold office, nor be eligible to membership.

Sec. 7. Any physician of reputable standing not a resident of Michigan, but a member of his own state or territorial Medical Association, after an introduction by a member present, may be accorded the privilege of participating in the scientific discussions.

Sec. 8. Resident honorary members shall be chosen from those who have practiced medicine not less than twenty-five years and have been active members in good standing of this Society for at least ten years.

They shall be nominated by the Council at any of its meetings and may be elected by a majority vote of the House of Delegates at the Annual Meeting following such nomination. They shall have all the privileges of the Society and receive all publications without payment of dues. Not more than five resident honorary members shall be elected at any one meeting.

Sec. 9. Any distinguished physician, not a resident of this state, may be elected an honorary member, provided he has been nominated by the Council at a previous meeting. Not more than two non-resident honorary members shall be elected at any one meeting.

Sec. 10. Scientists occupying teaching positions in medical institutions of the state, and not possessing a medical degree, may be elected honorary members by the House of Delegates by a three-fourths vote at any annual session.

ARTICLE V.—HOUSE OF DELEGATES

Sec. 1. The legislative powers of the society shall reside in the House of Delegates. The House of Delegates shall transact all the business of the Society not otherwise specifically provided for in this Constitution and By-Laws and shall elect the general officers excepting the President. The House of Delegates shall adopt rules and regulations for its own government and for the administration of the affairs of the Society, and shall delegate to the Council such power and authority as may be necessary for the efficient administration of the affairs of the Society while the House of Delegates is not in session.

Sec. 2. Composition. The House of Delegates is composed of delegates elected by the component County Societies. Each County Society shall be entitled to send to the House of Delegates each year one delegate for every fifty members and one for each additional major fraction thereof; but each County Society holding a charter from this Society which has made its annual report as provided in this Constitution and By-Laws shall be entitled to one delegate in the event that its membership does not total fifty.

Sec. 3. Officers of the Society shall be ex-officio members of the House of Delegates without power to vote.

Sec. 4. The House of Delegates shall provide for a division of scientific work of the Society into appropriate sections and for the organization of Councillor Districts.

ARTICLE VI.—SESSIONS AND MEETINGS

Sec. 1. The Society shall hold an annual meeting at such time, place and duration as the House of Delegates may determine. The session shall be open to all registered members, delegates and invited guests.

Sec. 2. Special meetings of the Society may be called for general session on the petition of the Council or by petition signed by 250 members, or upon petition of forty delegates registered at the previous regular session. The call for regular and special sessions shall be issued by the President and Secretary complying with these provisions and shall go forth not later than ten days before the proposed date of holding a regular or special session.

Sec. 3. Special meetings of the House of Delegates may be called by the Council, on a petition signed by thirty delegates who served at the last regular session of the house.

ARTICLE VII.—THE OFFICERS

Sec. 1. The general officers of this Society shall be a President, four (4) Vice-Presidents, a Secretary-Editor, a Treasurer, a Speaker and a Vice-Speaker of the House of Delegates, and a Board of Councillors of such number as the House of Delegates may fix from time to time by resolution.

Sec. 2. The President and Vice-President shall be elected for a term of one year. The Secretary-Editor and the Treasurer shall be elected by the Council at its Annual Meeting in January, and shall hold their offices for one year. The Councillors shall be elected for terms of five years each, these terms being so divided that Councillors shall be chosen each year. All of these officers shall serve until their successors are elected and installed.

Sec. 3. The officers of this Society shall be elected on the last day of the annual session. No delegate shall be eligible to any office named except that of Councillor, Speaker or Vice-Speaker. No person shall be elected to any such office who has not been a member of this Society for at least five years.

Sec. 4. Nominations for President shall be made from the floor of the first General Meeting. He shall be elected by a ballot of the majority present at the second General Meeting of the session. All nominations for Councillor shall be by a majority vote of the delegates from each respective district and shall be reported for election to the House of Delegates through the Committee on Nominations. Other officers shall be nominated and elected by a majority vote of the House of Delegates as hereinafter provided.

ARTICLE VIII.—THE SCIENTIFIC ASSEMBLY

Sec. 1. The Scientific Assembly of the Michigan State Medical Society is the convocation of its members for the presentation and discussion of subjects pertaining to the science and art of medicine, its allied specialties, and the problems of public health conservation.

Sec. 2. The Scientific Assembly is divided into sections, each section representing that branch of medicine described in its title.

Sec. 3. New sections may be created or existing sections discontinued by the House of Delegates. The Scientific Assembly and its sections shall be conducted in accordance with the rules and regulations set forth in this Constitution and By-Laws.

Sec. 4. The program for the Scientific Assembly shall be arranged by the committee on scientific work.

ARTICLE IX.—FUNDS AND EXPENSES

Sec. 1. Funds for meeting the expenses of the Society shall be provided by a yearly fee of ten dollars for each member, payable in advance to the Secretary of the component County Societies; from the profits of its publications and by assessments made by the House of Delegates.

Sec. 2. Funds may be appropriated by the House of Delegates, subject to approval by the Council, for publications, and for such other purposes as will promote the welfare of the Society and the profession, and encourage scientific investigation. The approval of the Council must be obtained before vouchers can be issued.

Sec. 3. Funds derived from whatever source or for whatever purpose shall be delivered to the Secretary for deposit with the Treasurer.

Sec. 4. Disbursement of funds shall only be made by voucher signed by the Chairman of the Council, Secretary and Treasurer. No single officer, Councillor or Committee shall have authority to disburse any of the Society's funds.

Sec. 5. Financial obligations of the Society can only be assumed and incurred by the House of Delegates and the Council jointly.

ARTICLE X.—RECIPROCITY OF MEMBERSHIP AMONG STATE SOCIETIES

To broaden professional fellowship among the State Societies, the Michigan State Medical Society, by its President and Secretary, is ready to arrange with other State Medical Societies, having equal requirements, for

the interchange of certificates of membership. Members removing from one of these states to another may thus avoid the formalities of re-election.

ARTICLE XI.—REFERENDUM

The General Meeting of the Society may, by a two-thirds vote, order a general referendum upon any question pending before the House of Delegates, and the House of Delegates may by a similar vote of its own members, or after a like vote of the General Meeting, submit any such question to the members of the Society for a final vote; and, if the persons voting shall comprise a majority of all the members registered at the session, a majority of such vote shall determine the question and be binding upon the House of Delegates.

ARTICLE XII.—THE SEAL

The Society shall have a common seal, with power to break, to change or to renew the same at pleasure.

ARTICLE XIII.—AMENDMENTS

Sec. 1. The House of Delegates may amend any article of this constitution by a two-thirds vote of the delegates registered at that Annual Meeting, provided that such amendment shall have been presented in open meeting at a previous annual session.

Sec. 2. This constitution shall become effective immediately upon its adoption.

BY-LAWS

CHAPTER I.—MEMBERSHIP

Sec. 1. All members of the component County Societies who are not in arrears for dues, shall be privileged to attend all meetings and to take part in all the proceedings of the Annual Session, and shall be eligible to any office within the gift of the Society except as otherwise provided.

Any member in arrears for dues to the amount of one year or more may regain membership either by paying up all back dues or by being again elected to membership.

Sec. 2. The name of a physician upon the properly certified roster of members, or list of delegates, of a chartered County Society, shall be prima facie evidence of his right to register at the Annual Session in the respective bodies of the Society.

Sec. 3. Each member in attendance at the Annual Session shall enter his name on the registration roster, indicating the component Society of which he is a member. When his right to membership has been verified by reference to the roster of his Society he shall receive a badge, which shall be evidence of his right to all the privileges of membership at that session. No member or delegate shall take part in any of the proceedings of the Annual Session until he has complied with the provisions of this section.

CHAPTER II.—GENERAL MEETINGS

Sec. 1. The General Meetings shall include all registered members and delegates who shall have equal rights to participate in the proceedings and to vote on pending questions. Each General Meeting shall be presided over by the President or, in his absence, by the Vice-President.

Sec. 2. The following shall be the order of business of the first General Meeting:

1. Call to order.
2. Invocation.
3. Address of welcome.
4. Report of the House of Delegates.
5. President's address.
6. Special addresses.
7. Resolutions and motions.
8. Nominations for President.
9. Appointment of Committees.

SECOND GENERAL MEETING

1. Call to order.
2. Report of House of Delegates.
3. Report of Committees.
4. Resolutions.
5. Election of President.
6. Introduction of President-Elect.
7. Adjournment.

Sec. 3. The General Meeting or any of the sections may recommend to the House of Delegates the appointment of committees or commissions for scientific investigations of special interest and importance to the profession and the public.

CHAPTER III.—HOUSE OF DELEGATES

Sec. 1. A delegate must have been a member of the Society for at least two years.

Sec. 2. The House of Delegates shall meet annually at such date as is designated for the Annual Meeting of the Society. It shall adjourn from day to day as may be necessary to complete its business, specifying its own time for the holding of its sessions.

Sec. 3. Thirty members shall constitute a quorum.

Sec. 4. A delegate once seated shall remain a delegate through the entire session and his place shall not be taken by any other delegate or alternate.

Sec. 5. The officers of the House of Delegates shall be Speaker, Vice-Speaker and Secretary. The Secretary of the State Society shall be its Secretary.

Sec. 6. (a) The House of Delegates is the legislative body of the Society. It has authority to adopt and institute such methods and measures as it may deem most efficient for the upbuilding and establishing of the interests of the profession in Michigan.

(b) It shall concern itself and advise as to the interests of the profession and of the public in those matters of legislation pertaining to medical education, medical registration, medical laws and public health.

(c) It shall be active in the education of the public in regard to medical research and scientific medicine.

(d) It shall elect delegates to the American Medical Association in accordance with the ruling of that parent organization.

(e) It shall divide the state into Councillor districts and direct the formation of District Societies.

(f) It shall have authority to appoint committees, standing or special, from among its members or the members of the Society. Such committees are to report to the House of Delegates and their members may participate in the debate upon their committee's report.

(g) It shall approve all memorials and resolutions in the name of the Society before the same shall become effective. Provided, that in the ad interim, in the presence of necessity for prompt action, the Council is empowered to act in behalf of the Society.

(h) It shall hear appeals from the Council in matters pertaining to disciplinary action of County Societies.

(i) It shall have authority to create or disband County Societies upon petition of the members residing in the County concerned. It shall issue and revoke charters of County Societies.

(j) It shall elect the four Vice-Presidents, Councillors, Speaker and Vice-Speaker. The Council shall elect the Secretary-Editor, Treasurer and Chairman of the Medico-Legal Committee. The President shall be nominated and elected in a General Meeting.

(k) The House of Delegates shall provide for the division of the scientific work of the Society into appropriate sections. It shall prescribe the rules governing the meetings of these sections and the election of section officers.

(l) It shall present a summary of its proceedings at the General Meetings of the Society and publish its minutes in The Journal.

(m) It shall have the following standing and business committees.

1. Committees on—
   (a) Reports of Council,
   (b) Reports of Officers and Committees,
   (c) Nominations and elections,
   (d) Miscellaneous business,
   (e) Special committees.

(n) No new business shall be introduced in the last session of the house without unanimous consent of the delegates except when presented by the Council. All new business so presented shall require three-fourths affirmative vote for adoption.

(o) Robert's Rules of Order shall govern the House of Delegates when not in conflict with the Constitution and By-Laws.

CHAPTER IV.—SECTIONS

Sec. 1. Sections shall hold their meetings at such time and place as will not interfere with General Meetings.

Sec. 2. Sections are subject to the rulings and regulations provided by the House of Delegates for their government.

Sec. 3. At each Annual Meeting, a section chairman shall be elected by the members of the section to preside at the following Annual Session. A Section Secretary shall be chosen each second year to serve for two years or until his successor is elected.

Sec. 4. The program of each section shall be arranged by the Scientific Committee of the Society.

Sec. 5. No paper shall be presented, the reading of which consumes more than fifteen minutes. No paper shall be read by title without the consent of the section members. Discussions shall be limited to five minutes. Papers and discussions presented before any Section or General Meeting become the property of the Society and shall not be published elsewhere without the consent of the Publication Committee of the Council.

Sec. 6. Each section may appoint committees which shall investigate and report back concerning such matters as are of especial interest to such sections.

Sec. 7. The following sections shall compose the scientific assembly of the Society:

1. General Medicine.
2. Surgery.
3. Obstetrics and Gynecology.
4. Ophthalmology and Oto-Laryngology.
5. Pediatrics.
6. Public Health.

CHAPTER V.—ELECTION OF OFFICERS

Sec. 1. All election of officers shall be by secret ballot and a majority of votes cast shall be necessary to elect. In the event that there is but one nominee for a given office a viva voce vote may be taken.

Sec. 2. The House of Delegates shall be the electoral college.

Sec. 3. The Speaker and Vice-Speaker shall be nominated from the floor of the House.

Sec. 4. A nominating committee shall be appointed by the Speaker. The duty of this committee is to nominate candidates for the office of Vice-Presidents, Delegates and Alternates to the American Medical Association, and all other officers that may be hereafter provided for. It shall report to the House of Delegates nominations for Councillors as made by the majority vote of the delegates from their respective districts. It shall also submit recommendations for the places in which Annual Meetings are to be held.

Sec. 5. The election of officers shall be the first order of business at the last session of the house.

Sec. 6. The Secretary-Editor, Treasurer and Chairman of the Medico-Legal Committee shall be elected by the Council.

Sec. 7. The term of a newly elected officer shall begin at the adjournment of the House and shall continue until his successor is elected.

CHAPTER VI.—DUTIES OF OFFICERS

Sec. 1. The President shall preside at all General Meetings of the Society, shall fill all vacancies in consultation with the Council unless otherwise provided for; shall appoint the members of all committees not otherwise provided for; shall deliver the President's annual address; shall, as far as practicable, visit component County Societies. He shall have a voice in the deliberations of the House of Delegates; he shall be an ex-officio member of the Council.

Sec. 2. The Vice-Presidents in the order of their seniority shall perform the duties of the President in his absence or upon his request. In case of death of the President or resignation, the First Vice-President shall officiate during the unexpired term.

Sec. 3. The Treasurer shall be the custodian of all the funds and securities of the Society. He shall be elected by the Council and accountable through the Council to the Society. He shall disburse no funds except upon a voucher signed by the Chairman of the Council, the Secretary and the Treasurer. The funds of the Medico-Legal Committee shall not be disbursed except on voucher signed by the Chairman of the Medico-Legal Committee, Chairman of the Council and the Treasurer. He shall invest the surplus funds of the Society only on approval of the Council.

Sec. 4. The Secretary-Editor shall be the custodian of all the records of the Society, he shall conduct all the official correspondence of the Society at the direction of the House of Delegates, the Council and the officers of the Society. He shall be the Recording Officer of the House of Delegates, the Council and the Scientific Assembly and ex-officio member of those bodies. He shall also discharge the following duties:

1. Collect membership dues, keep membership records and issue membership certificates.
2. He shall conduct the correspondence with component County Societies.
3. He shall make all required reports to the American Medical Association.
4. He shall act as one of the delegates to the American Medical Association.
5. He shall deposit all funds received with the Treasurer.
6. He shall render an Annual Report to the Council reviewing the Society's activities and imparting recommendations for the advancement of the Society's interests.
7. He shall perform such other duties as the Council may direct. Under the direction of the Council he shall be the Editor and Business Manager of the Journal, performing all duties concerned with the issuance of that publication.
8. He shall superintend the making of all arrangements for the holding of all meetings in compliance with the Constitution and By-Laws and the instructions of the House of Delegates and Council.
9. He shall send out all official notices of meetings, committee appointments, certificates of election to office and special duties of committees.
10. He shall receive and transmit to the House of Delegates and the Council all committee and officers' reports.
11. He shall be elected by the Council and shall be remunerated by a salary, the amount of which shall be fixed by the Council.

CHAPTER VII.—THE COUNCIL

Sec. 1. The Council is the executive body of the Society. It shall determine its own time and place of meeting. It shall elect its own Chairman and Vice-

Chairman to serve one year. Its Annual Meeting shall be held co-incident with the Annual Meeting of the Society.

Sec. 2. The Council, between meetings of the House of Delegates, may legislate as the House of Delegates upon any matter over which the House of Delegates has jurisdiction, but such legislation shall be consistent with any action taken by the House of Delegates and shall not nullify any action taken by the House.

Sec. 3. Collectively, the Council shall be the Board of Censors of the Society. It shall consider all questions involving the right and standing of members, whether in relation to other members, to the component Societies, or to this Society. All questions of an ethical nature brought before the House of Delegates or the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or of a County Society, upon which an appeal is taken from the decision of an individual Councillor. Appeal may be taken to the House of Delegates.

Sec. 4. It shall make careful inquiry into the condition of the profession of each county in the state, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such County Societies as already exist and for organizing the profession in Counties where Societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse between physicians of the same locality and shall continue these efforts until every reputable physician of the state has been brought under the Society's influence.

Sec. 5. It shall, upon application, provide and issue charters to County Societies organized in conformity with the spirit of this Constitution and By-Laws.

Sec. 6. In sparsely settled sections it shall have the authority to organize the physicians of two or more Counties into Societies, to be designated by a suitable name so as to distinguish them from district and other classes of Societies. These Societies when organized and chartered, shall be entitled to all the privileges and representation provided herein for County Societies, until such Counties may be organized separately.

Sec. 7. The Council shall direct and control the publication of the Journal.

Sec. 8. The Council shall approve the expenditure of the funds of the Society. The House of Delegates, by two-thirds vote, may direct the expenditure of any appropriation disapproved by the Council. In the event the Council does not approve action by the House of Delegates appropriating definite amounts of expenditure, it shall submit within twenty-four hours its reasons therefor to the House of Delegates. In case of dispute the action of the House shall be final.

Sec. 9. The Council shall appoint the members of the Medico-Legal Committee and supervise the duties and work of that Committee.

CHAPTER VIII.—STANDING COMMITTEES' DUTIES

Sec. 1. The Standing Committees of the Society shall be as follows:

(a) Committce on Legislation.
(b) Committee on Scientific Work.
(c) Committee on Public Health Education.
(d) Medico-Legal Committee.

Sec. 2. The Committee on Legislation shall consist of five members serving five years each, one new member being appointed each year by the President. The first appointments under this section are to be made for one, two, three, four and five years respectively.

The Committee on Legislation shall utilize every organized influence of the profession in promoting such legislation concerning public health and scientific medicine as will be of greatest benefit to the public.

It shall work under the direction of the House of Delegates or of the Council when the House is not in session.

No bill or proposed law or amendment thereto shall be introduced in the State Legislature or sent to any member thereof in the name of this Society or by any of its committees until such proposed legislation shall have been indorsed and approved by the Council of this Society in regular session.

It shall submit an Annual Report with recommendations to the House of Delegates.

Sec. 3. Committee on Scientific Work:

This Committee shall consist of the President, Secretary and officers of constituted sections. It shall be the duty of this Committee to arrange the programs for the section meetings.

Section 4. Committee on Public Health Education:

This Committee on Public Health Education shall consist of five members serving five years each, one new member being appointed each year by the President. The first appointments under this section are to be made for one, two, three, four and five years respectively.

It shall be the duty of this Committee to join with representatives from the Medical Department, University of Michigan, Detroit College of Medicine and Surgery, Michigan State Anti-Tuberculosis Association, Michigan Association Welfare League, State Department of Health, Michigan State Dental Society and Michigan State Nurses' Association for the purpose of carrying out an educational program to enlighten the public of Michigan in regard to scientific medicine.

Sec. 5. Medico-Legal Committee:

The Medico-Legal Committee shall consist of an executive board of five, to be elected by the Council, and also one member from each component Society to be elected by the component Societies. The executive board shall be elected for one, two, three, four and five years, respectively, and thereafter one member shall be elected each year to hold office for five years. All other members of the committee shall be elected for one year.

The members of the executive board shall be elected at the January meeting of the Council and shall immediately assume office. Members of the Medico-Legal Committee shall be elected, one by each component Society participating in the defense fund, at the first meeting after September 1st and shall assume office January 1st following.

The Council at its January meeting shall elect one of the five members of the Executive Board as Chairman, whose term of office shall be for one year. He shall also act as Chairman of the entire Committee.

No disbursement shall be made from the Medico-Legal fund without the signatures of the Chairman of the Executive Board and the Chairman of the Council or the Secretary of the State Society.

The salary of the Chairman of the Medico-Legal Committee shall be fixed by the Council annually.

The Executive Board shall report to the Council at its Annual Meeting, giving full particulars of the work of the Committee and a detailed statement of income and disbursements.

It shall engage by the year a competent firm as general attorneys and fix their compensation. Their duties shall be to compile from all available sources court decisions fixing the law of liability of physicians for civil malpractice, such compilations to be the property of the Society, and also to defend any member of the Society not in arrears, when sued or threatened with suit for civil malpractice, or to supervise such defense through a local attorney.

Members in arrears after April 1st shall not be entitled to defense for any suit, the cause of action of which arose while in arrears, and any member sued or threatened before joining the Society or before the organization of the Medico-Legal fund must pay the actual cost of defense in such suit.

With the exception above noted, the Medico-Legal Committee shall undertake the defense of any members of the Society sued or threatened with suit for civil malpractice through all State and Federal Courts operating in Michigan, regardless of the time when the alleged cause for action arose and shall also defend any action for civil malpractice against the estate of a deceased member, provided he or she, while living, has conformed to the foregoing requirements.

In the event that during any one year the demands upon the Medico-Legal fund be large enough to exhaust it, the Council shall be authorized to loan sufficient funds from the Treasury of the State Society to meet the contingency.

It shall be the duty of any member of the Society threatened with action for civil malpractice to confer at once with the member of the Medico-Legal Committee from his component Society and with his aid prepare the case and forward the same to the chairman of the Executive Board. He must agree not to settle or compromise his case without the consent of the Executive Board and the general attorneys. He may recommend, in conjunction with the local member of the Medico-Legal Committee, the best available local attorney, but the authority to engage the services of local attorneys shall lie with the Executive Board and their general attorneys. The local attorney chosen shall enter the appearance of his client and undertake his defense under the supervision of the general attorneys.

All attorney's fees and costs will be paid from the Medico-Legal fund and defense carried through all federal and state courts operating in Michigan, but under no circumstances shall this fund be liable for any damages declared against an unsuccessful litigant.

CHAPTER IX.—EMERGENCY

Sec. 1. When prompt speech and action are imperative, authority to speak and act in the name of the Society is invested in the Council.

CHAPTER X.—ANNUAL DUES

Sec. 1. The annual assessment shall be ten dollars. The Secretary of each County Society shall collect and forward the same to the State Secretary.

Sec. 2. Members in arrears after April 1st of the official year shall be suspended and shall not participate in the benefits of the Society until reinstated.

CHAPTER XI.—COUNTY SOCIETIES

Sec. 1. All County Societies now in affiliation with the State Society or those which may hereafter be organized in this state, which have adopted principles of organization not in conflict with this Constitution and By-Laws or with the Code of Ethics of the American Medical Association, shall upon application to the Council, receive a charter and become a component part of this Society, subject to the condition described in Section four of this chapter. A roster of its officers and members and the annual assessment and subscription to the Journal for each member must accompany the application.

Sec. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws a Medical Society shall be organized in every County in the State in which no comonent Society exists.

Sec. 3. Charters shall be issued only upon approval of the Council, and shall be signed by the President and Secretary of this Society. The Council shall have authority to revoke the charter of any component Society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws or the code of ethics of the American Medical Association.

Sec. 4. Only one component Medical Society shall be chartered in any County. Where more than one County Society exists, friendly overture and concessions shall be made, with the aid of the Councillor for the district if necessary, and all of the members brought into one organization. In case of failure to unite an appeal may be made to the Council which shall decide what action shall be taken.

Sec. 5. Each County Society shall be the judge of the qualifications of its own members; but, as such Societies are the only portals to this Society and to the American Medical Association, every reputable and legally registered practitioner of medicine shall be eligible to membership. Before a charter is issued to any County Society, full and ample notice and opportunity shall be given to every eligible physician in the County to become a member.

Sec. 6. Any physician who may feel aggrieved with the action of the Society of his County in suspending or expelling him from membership shall have the right of appeal to the Councillor of his district.

Sec. 7. In hearing appeals the Council or the Councillor may admit oral or written evidence as in their judgment will best and most fairly present facts. Efforts at conciliation and compromise shall, however, precede all hearings.

Sec. 8. When a member in good standing in a component Society moves to another County in this state he shall be given without cost a transfer card good for the time for which his dues are paid, not exceeding one year from the first of January following the date of issue. This card shall be void if not accepted by a component Society before such limit expires.

Sec. 9. A physician living near a county line may hold his membership in that county most convenient for him to attend, on permission of the Society in whose jurisdiction he resides.

Sec. 10. Each County Society shall have general direction of the affairs of the profession in the county, and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician in the county; and systematic efforts shall be made by each member and by the Society as a whole, to increase the membership until it embraces every qualified physician in the county.

Sec. 11. At the annual meeting in the fall, or at the first meeting after January 1st, due notice having been given, each County Society shall elect annually a delegate and an alternate to represent it in the House of Delegates of this Society. In case a County Society has more than fifty members it shall be entitled to one delegate for each fifty members or major fraction thereof. The Secretary of the County Society shall immediately send the list of its delegates to the Secretary of this Society.

Sec. 12. The Secretary of each County Society shall keep a roster of its members, and a list of the non-affiliated physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this state and such other information as may be deemed necessary, upon blanks supplied him for the purpose, together with remittance for such collections, to the state secretary.

CHAPTER XII

These By-Laws may be amended by majority vote of the delegates present, after the amendment has laid on the table one day. These By-Laws become effective immediately upon adoption.

The Journal
OF THE
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JULY, 1924

Report Malpractice Threats Immediately to Doctor F. B. Tibbals, 1212 Kresge Building, Detroit, Mich.

Editorials

A. M. A. CHICAGO MEETING

The annual meeting of the American Medical Association that was held in Chicago the week of June 9th was attended by some 400 Michigan members. The complete records of the meeting will be found in the minutes that are being published in the Journal of the American Medical Association. In this issue we are imparting what may be well appraised as two important features of that meeting, President Wilbur's address and a Supplemental Report of the Judicial Council. The meeting as a whole may be appraised as having manifested the following outstanding features: Largest attendance in the history of the Association; compact arrangements of the Pier, whereby all sections were easy of access; exceptional interest in the scientific program; extraordinary scientific and commercial exhibits; a clinical program that was continuous from 9 a. m. to 4 p. m.; hotel accommodations so well managed that the guests were relieved of extra funds by the exhorbitant rates charged; a House of Delegates that demonstrated a very commendable interest in the profession's problems by the sincerity they manifested in the endeavor to enact desirable policies and principles. That's it in a nut shell.

Incoming President, Dr. Pusey, delivered a splendid address that did honor to himself and to the Association. It outlined a situation that exists and is being developed. We trust that there are those in Michigan who will make it their business to assist in solving the problem.

Our State Society was well represented in the House of Delegates by Doctors Hornbogen, Brook, Luce and Frothingham. In addition, Doctors B. R. Shurly and L. J. Hirschman represented two of the Scientific Sections. These delegates will present a more detailed report at our annnual meeting in Mt. Clemens.

Dr. W. D. Haggard of Nashville, Tenn., was chosen as president-elect. Dr. Haggard is a well known surgeon, affiliated with the Vanderbilt University, and well merits the honor that was thus bestowed upon him. Doctors J. H. Walsh of Chicago, E. B. Heckel of Pittsburgh, and T. McDavitt of St. Paul, were elected as members of the board of Trustees. Olin West of Chicago was re-elected secretary and Austin Hayden of Chicago was re-elected treasurer. Your Secretary-Editor was re-elected Speaker of the House of Delegates. An expression of preference for Atlantic City was given as the place for the holding of the next annual meeting of the Association in 1925.

REVISION OF OUR CONSTITUTION AND BY-LAWS

At the last session of the House of Delegates a committee was appointed to present a new Constitution and By-Laws for adoption at our 1924 annual meeting. In order that members and delegates might be thoroughly conversant with the provisions contained in such a revision, instructions were given that the new draft be published in the Journal at least two months before the annual meeting.

The committee's report is contained in this issue. Under the direction of the chairman of the committee, Dr. J. G. R. Manwaring of Flint, much time and thought has been given to the preparation of their report. It is now urged that each delegate study this proposed new Constitution and By-Laws so that he may be able to vote intelligently when it is taken up for consideration by the House of Delegates at the annual meeting in Mt. Clemens.

JOBBING YOUR SERVICES AND TIME

One great criticism that may be laid at the door of doctors is that they jump at conclusions and enter into movements with far too little thought as to the final result and situation that will be developed. We have all heard of life extension institutes and examinations un-

der one name or another, but all of them embody the same plan and scheme. Many became affiliated, many became local examiners and many thought only of the three or five dollars. A few there were who gave thought to the situation that would be the outcome. We are grateful to the Judicial Council of the A. M. A. for presenting the problem to the profession, as they have so ably done in the following report. If you or any of your associates are jobbing your services and time to lay corporations and allowing them to profit thereby and also undermine the profession's independence, we recommend that you read this report and learn the degrading influence of such a practice.

SUPPLEMENTARY REPORT OF JUDICIAL COUNCIL

To the Members of the House of Delegates of the American Medical Association:

The medical profession is confronted today with one of the most important and serious problems that it has been called on to meet. Briefly, and in business parlance, the question is: Shall the medical profession vend it products directly to the consumer or shall it sell them to a middleman or third party? This question comes to the attention of the Judicial Council by reason of the extensive propaganda that is being waged at the present time in regard to periodic health examinations. The American Medical Association has gone on record through this House of Delegates favoring periodic examinations, and this Council concurs in the desirability of such examinations being made. At the last meeting of the House of Delegates, however, the question now raised was not considered. Since then a number of commercial organizations have entered the field and, as middlemen, or jobbers, are offering to furnish periodic medical examinations to the public generally for a stated sum per annum and to send reports of the findings at the examination to the examined; and some of these organizations are giving advice to the examined as to what they should do for the conditions found. These examinations, of course, can be made only by physicians; hence, these companies are signing up contracts with physicians throughout the country to make examinations of all persons sent to them by the praticular company holding the contract, and to forward the reports directly to the company.

THE INDEPENDENCE OF THE PHYSICIAN

For these examinations, the company pays the physician a definite price and then sells the results of the examination to the individual examined at a much higher price. In other words, these companies acting as jobbers buy the physician's services at one price and sell them to the public at another. The questions that should receive the most serious and earnest consideration of this House of Delegates are: Should the physician deal with the jobber, or should he sell his services directly to the consumer? and, What is going to be the ultimate effect on the independence and the welfare of the physician as a result of thus dealing through a jobber, or middleman?

When a physician signs a contract with a commercial organization to make physical examinations of all persons sent to him by the organization for a price set by the organization, and allows that organization to make its own charge to the individuals examined for the services rendered by the physician, the physician is selling his independence to the jobber. One of the largest jobbers in this line buys the services of the physician for $5 and sells it to the individual for $20 or $25. It is the knowledge of the physician that gives value to the services, and this value is not enhanced or increased any by passing through the jobber's hands.

SOME FINANCIAL FIGURES

One of the arguments advanced by institutions of the kind in question is that they are doing a great public service in their propaganda for periodic medical examinations, or, as they sometimes call it, preclinical medicine, and that their work, therefore, is largely altruistic and plilanthropic. We will not attempt to argue the question of the value of periodic physical examinations, as that is not in issue at this time; but some attention may be directed very profitably to the claims of altruism and philanthropy. One of the institutions already in the field, a stock corporation organized for profit, was capitalized for $200,000 preferred stock, and three shares of common stock were issued for each share of preferred. The preferred stock was increased to $236,000 paid in, and recently a preferred stock dividend of $90,000 was paid, but no common stock was issued with it. The authorized capital stock is now $400.000 preferred stock, of which some $326,000 is outstanding. The amount of common stock outstanding is $689,100, or a total of $1,015,100. During the year 1923, the earnings of this company were $611,146.93, and the profits $55,217.96. During the three months of November and December, 1923, and January, 1924, the operating profits were $4,007.67, $6,176.29 and $6,932.91, respectively, each month showing a material increase over the previous month. At this rate the profits for the year would amount to approximately $70,000, or 21 per cent on the preferred stock outstanding or 30 per cent on the actual money paid in. During the same three months the work done in the roentgen-ray laboratory alone amounted to $35,881.20, which is at the rate of $143,524 a year.

It is said that two-thirds of the outstanding common stock has been trusteed and that the dividends, if any, on this trusteed common stock are to be applied to public health work. As no dividends have been paid on common stock, no public health work has been done by the trustees holding the trusteed stock. In addition to the individual examinations made, this company has contracts with thirty-nine old line insurance companies to furnish them with reports on all examinations made of their policyholders. It also contracts with industrial plants to make examinations of all of their employes. The company pays the physician only $2.50 for examinations made of all policyholders in insurance companies with which it has contracts, and then sells the information which it receives from the physician to the insurance company for $5. The examinations of employes of industrial plants are made by physicians sent directly from the home office of the company and not by the local physicians.

WHAT IS BEST FOR THE PUBLIC?

In view of the fact that this company is a stock company organized for profit, that it has paid a large stock dividend, and that its earnings are now increasing annually, its claims to altruism and public benefaction are proper subjects for investigation and analysis. It is further claimed by this institution that the work it is doing is of great value to the physician, at least to those physicians who have signed contracts to market their products through the company. In a recent letter from this company, it is stated: "It must be conceded that we are giving a powerful impulse to the development of the general practitioner, not only in the matter of encouraging the people to consult him but in stimulating him to broaden his diagnostic work and adjust himself to this ever-increasing public demand for preclinical service." There are several things stated in this sentence which deserve atten-

tion. It is stated that "it must be conceded that we (the institution) are giving a powerful impulse to the development of the general practitioner." Is it conceded by the profession that it was necessary for a commercial institution to enter the fiefild of medicine to buy and sell the product of the physician's brains in order to stimulate the development of the physician? Is it conceded that making examinations for a commercial organization for $5 each, which the company immediately sells to the examined for four times that amount, is a powerful impulse to the development of the physician's ability? Does it stimulate the diagnostic work of the physician to have the work bought by a jobber at one price and immediately resold to the consumer at a much higher price? Is there such a revolution taking place in the practice of medicine by its commercialization by stock companies, organized for profit, that it is necessary for the physician to readjust himself to the new order of things? If these things are true, it is certainly time for the profession to rouse itself from its slumber of inertia before it is shorn of its strength by the Delilah of commercialism. This is not a case of the good of the public versus the good of the profession. If it were, there would be no question at issue, for the profession always has and always will yield its own interests to that of the public good; but it is a case in which the public good can be best served only by what is best for the profession.

EIGHT THOUSAND EXAMINERS FOR ONE COMPANY

One of these institutions claims to have 8,000 physicians on its list of examiners. That so many medical men have been induced to consent to give their services for a small remuneration to a company to resell to the individual can be understood only by assuming that they failed to analyze the situation and to comprehend its significance. And this brings us to the question of what is going to be the effect on the independence and the welfare of the physician of thus dealing with a jobber. It should be remembered that all reports are sent directly to the home office, the examiner having no copy of them, and having no records of the cases examined. Furthermore, the examination made by the physician is not complete in that one of the most important elements in the examination is not made by him; namely, an examination of the urine. When the person to be examined receives notice to present himself to the physician for examination, he also receives a container with instructions to fill it with his urine and mail it at once directly to the home office. It might appear from this that the home office, while having confidence in the local physician's ability to make an examination of the blood, heart, lungs, eyes, nervous system, etc., thought him incompetent to make an ordinary examination of the urine. To us, however, it has a deeper significance. If there is one thing that the laity has been led to believe, it is the value of an occasional uninalysis. The home office, therefore, has the individual send a specimen of urine at stated intervals for examination. As these specimens do not pass through the hands of the local physician, the only place where the individual can obtain information concerning his condition is from the home office. The individual thus becomes, as it were, tied to the home office. It is evident that in time the home office and it alone will be in possession of full information of the physical condition of a very large number of individuals which will be of very great value to it. This is already shown by the fact that thirty-nine insurance companies have contracted to pay $5 apiece for information concerning its policyholders. It requires no stretch of the imagination to see insurance companies obtaining in this way information concerning the physical condition of non-policyholders with a view of soliciting insurance without the necessity of further medical examination. Corporations, business firms and others may likewise apply to the home office for information concerning the physical condition of employes, business associates, and others, and without going into further detail it is easy to see many ways in which the accumulated information may be of great pecuniary value to the home office, with corresponding loss to the medical profession.

THE INTEREST OF THE PATIENT AND THE ENCOURAGEMENT OF MEDICAL PROGRESS

Individualism in the practice ofm edicine is essential to success if one has in mind the interest of the patient and the encouragement of medical progress; but we should distinguish very clearly between those things which are of purely individual concern and those which concern the welfare of the profession as a whole. In the one case, the problems may safely be left to each one to work out for himself; while, in the other, co-operation and collective effort are absolutely indispensable to self-preservation. The relation between the patient and the physician is an individual matter, and anything that disturbs this relationship is detrimental to the best interest of the patient. We cannot help but feel that the service of periodic health examinations, as conducted by commercial institutions, must inevitably result in the undermining of the confidence of the people in the ability of the practitioner. While these examinations are made by local physicians to whom the individuals are sent by the home office, it is made clear to them that it is necessary for the home office to complete the examinations by making the urinalyses, and, furthermore, it is impressed on them that the home office alone is competent to interpret the findings of the physicians making the examinations and to report the results to the examined. This is well shown by the fact that, in the blank which the individual himself is to fill out, space is left for the following: "Any question you may wish to ask regarding your health" and again: "Give address to which all reports are to be sent." From the foregoing it is perfectly evident that the person examined is led to believe that the physician making the examination is not competent to answer any questions regarding his health, and that all communications on the subject should be addressed to the home office.

WHAT WILL THE NEXT STEP BE?

While the institution claims that it does not advise the patient as to treatment but refers him to his physician or to the examiner for any treatment which the home office may think necessary, it does advise as to diet, exercise and hygienic measures, which, however, are held not to constitute treatment. It is but a short step from what is now being done to what may be done in the way of treatment; and while it is denied that the institution intends to treat patients, we believe that it is n outnfair to assume that the idea is not entirely foreign to the medical director, for in a letter recently received from him he said: "I am sure from my own knowledge of the situation that the public will not receive kindly any action on the part of the organized medical profession reflecting an undiscriminating condemnation of all efforts to render *hygienic* and *medical service* to the public aside from that rendered by the general practitioner." It is not difficult to see in this statement a veiled threat directed against this organization, as well as a gentle hint that medical service may be rendered to the public by institutions, aside from that rendered by the general practitioner. Medical service in this connection can mean nothing but treatment of the sick. Institutions of the kind under discussion are almost certain to drift into treating patients, just as commercial laboratories that started out with the idea of doing only laboratory work are now giving treatments to certain patients who applied to them for laboratory examinations.

We believe that enough has been said to show the importance of the subject, and feel that it is incumbent on this body to devise ways and means of setting the public aright on the question of periodic health examinations, and to convince the people that the proper person to make such examinations and to give advice relative thereto is the family physician, aided, when necessary, by local specialists.

M. L. Harris, Chairman.
W. S. Thayer.
J. C. Chase.
J. N. Hall.
F. W. Cregor.
Olin West, Secretary.

CONFRONTING PROBLEMS

Because of the man, his experience, ability to judge and because of his keen and clear perception of the problems that are confronting the medical profession, we are reprinting the address that was delivered by President Wilbur to the House of Delegates of the American Medical Association at the recent Chicago meeting. Especially do we urge serious reflection upon his comments regarding our relationship to the public and questions of public health activity and that part relating to medical education. The time is at hand when Michigan doctors, through their state society, must outline a policy that will keep us abreast of the times. It is hoped that this may be accomplished at our next annual session. President Wilbur's advice merits your consideration.

Mr. Speaker, Delegates and Trustees of the American Medical Association:

This past year has been a very pleasant one for me. As President of this Association and last year as President-Elect I have had a return of that friendly, kindly professional feeling that you all know. It is a great thing to be a member of an association like this, the member of a great profession. There is a friendliness about it that I think transcends that of any other profession. I can say quite frankly I have had a very pleasant and happy time, and I have enjoyed my associations with you men and other members of the profession. Wherever I have gone in the United States, I have found a lot of fine medical men interested in the Association and in the affairs of the profession and in the welfare of their communities. It has been a pleasure to see them because they have something that you do not find so often among other men, a certain unselfishness in their relationship to the public, and the public appreciates that. Sometimes they take a rather awkward way of showing us that, but they really do.

Now, I have been thinking a good deal during this year about the future of the medical profession, particularly in this country. Great forces are stirring in every part of society. I can illustrate the thing in my mind by giving you an illustration. The telephone company has had in the United States an almost unparalleled advance, and except in a few local instances there has been no particular problem from the legal standpoint and the political standpoint in repard to the telephone. It has extended its services everywhere. It has kept its rates on a level so that anybody could use the telephone, and it has provided a great public service. On the other hand, the railroads seem to be always in difficulties. They do something similar on a more extensive scale to that which is done by the telephone. It is largely a difference in the way the problem has been managed.

Mr. Theodore Vaile understood the public and was always ahead of the public in the things that the telephone could offer, always seeking new methods and putting them into effect. The railroad presidents, on the other hand, are usually about ten years behind the times on many things they tackle. They are always, consequently, in hot water, always up before bureaus for investigation and before Congress for study, and they are always fighting legislation; after they get it they stand for that and fight the next, and so on.

Now, the question for the medical profession is: Which method are we going to adopt? Are we going to be up with the game or are we going to be ten years behind? Because we must study these great social processes that are going on and the relationship that the profession bears to them. We can do it and I feel that we must.

We get lost every once in a while on things that come along. One of the greatest advantages in the United States of America is that we have forty-eight states. Any state can try an experiment, and if it is a bad one it alone suffers. If it is a good one, the others can profit by it. So we have a chance with an organized profession in forty-eight states to try out various devices. For the most part, the things that are being tried out are tried out on us instead of by us, because others are forcing our hands. We have not kept the game in our control.

The development of preventive medicine and of public health since the inauguration of the public health of today based on bacteriology has been of such a character that many have thought that the whole control of health should go over to the state. Now, it seems to me there is a dividing line which can be made and that we ought to have a definite series of studies along that line. The state is interested in the protection of individuals from contagious diseases. It has a right and it is willing to spend sums of money for that purpose. It seems to me that the state is not responsible for people who have resources of their own for their medical or surgical care. There are necessarily certain services that must be rendered to the indigent, to the insane and to the prisoner. It seems to me, too, that we must keep individualism in medicine if it is to advance, and we must keep individual relations between patients and physicians if medicine as an art is to go forward. The minute we allow a bureaucracy to step in between the physician and the patient, it seems to me we have taken the one step that will degrade our professon and that will put us so that we cannot render ideal professional services to patients.

Now I think that we ought gradually to get a definition in the minds of the public of what the taxpayers should pay for in health matters, and that we should at the same time have a clear understanding of what our responsibility is, and then meet that responsibility as we can do only by proper organization. We have tried by a method of somewhat over-standardization to handle medical education and some other medical affairs. You cannot standardize the price or the cost of taking out tonsils, because it is not simply a mechanical operation. One time you do it on a Chinese patient that cannot answer back or talk, and who does nothing but open his mouth and expectorate afterward. The other time you do it on a child with a mother and father and uncle and aunt and so on whom you have to spend a great deal of time on. In other words, since time is really the only thing a physician has to sell, he is the man that

has to decide the individual responsibility he is taking in individual cases and the time consumed. When we get too much standardization, even in the charges that are being demanded, it seems to me that again we are interfering with the individual.

We can, though, develop a high sense of professional responsibility and a desire to play fair with the public and the other men in the profession, and I think that if you will analyze it carefully, you will admit that much of our success has been due to the fact that this has been the basis of medical association and medical organization.

I think as I look over my experience of the past year in the different groups to whom I have talked that the time is ripe for a considerable change in medical practice. I think we are going to accomplish something in medical education and prepare men somewhat better for medical practice than we have, because we are doing more to emphasize the clinical. I think we are beginning to train our students more to really take care of the sick than simply to diagnose the sick as they have been inclined to do in the past. But it seems to me that with the change in the type of illness, with the development of office practice, with the great social changes that are going on now so that people are flocking to the cities and leaving the country, and with the development of the hospital, we have a whole series of problems to work out among ourselves. Now, to me the rural practitioner problem is not one that we can solve. It is a great social question, this transfer of people from the farms to the cities; it comes with more machinery, with better roads, with gasoline and all that sort of thing, with the changed attitudes of people, with the desire to get more education for the children, and so on. If you will study the population curves, you will see that people are going into the cities from the country, and right now we are having an overproduction on the part of the farms; that to me can be solved only by a million or more farmers moving into the city and going into industry, because we have overproduction on the farms.

With these things in mind, it is evident that the profession cannot solve this problem by sending out a few more rural physicians. What they can do and should do is to provide competent, thoroughly trained men who will consider medicine a life of study, so that they can keep up with the great mass of information that is being gathered and is gathered every day, for in the long run our problem is simply this: Medicine in the last thirty years has gathered together a fund of information which, if it could be directly applied to the benefit of every individual, would prolong life and happiness, and change the whole current of human thought and life. The fund of information is available. We stand between that information and the public. It is our problem to provide for its distribution. If we make those provisions wisely, if we meet the situation, then we shall retain the mastery; if we fail, general education has reached such a level that others will begin to demand that there be a distribution of this information available to the human race, and we shall lose our position of mastery. I have confidence that we shall maintain it.

REPORT OF HEALTH LECTURES—1923-1924

Assigned under the Auspices of the State Joint Committee on Public Health Education, including Health Lectures Assigned in Detroit under the Joint Auspices of the State Joint Committee and the Wayne County Medical Society Committee on Public Education.

The Joint Committee on Public Health Education was organized December 13, 1921, on the initiative of the Michigan State Medical Society. The membership of this committee at present includes accredited representatives from the following organizations: Michigan State Medical Society, University of Michigan, Detroit College of Medicine and Surgery, Michigan Department of Health, Michigan State Dental Society, Michigan Tuberculosis Association, Michigan State Nurses' Association, and the Michigan State Conference of Social Work.

The function of the joint committee is to present to the public the fundamental facts of modern scientific medicine for the purpose of building up sound public opinion relative to the questions of public and private health. It is concerned in bringing the truth to the people, not in supporting or attacking any school, sect, or theory of medical practice. It will send out teachers, not advocates.

Public health lectures are assigned free of charge through the medium of the University of Michigan Extension Division to organizations throughout the state interested in health education.

Interest in the Michigan health education program is very marked, as evidenced by the constantly increasing number of calls for these lectures. The following brief report will give some idea of the range and magnitude of this health education program, as conducted during the past year.

One or more health lectures were given by members of the speaking staff of the joint committee:

Prof. Barbara H. Bartlett
Juliet Bell, A. B.
C. E. Boys, M. D.
G. M. Brown, M. D.
E. W. Brubaker, A. B.
James D. Bruce, M. D.
R. W. Bunting, D. D. Sc.
Hugh Cabot, M. D.
E. I. Carr, M. D.
C. D. Camp, M. D.
J. T. Case, M. D.
A. W. Crane, M. D.
H. F. Crossen, M. D.
W. R. Davis, D. D. S.
Marjorie Delavan, A. B.
R. L. Dixon, M. D.
W. T. Dodge, M. D.
C. F. DuBois, M. D.
W. J. DuBois, M. D.
A. F. Fischer, M. D.
W. E. Forsythe, M. D.
W. H. Fraser
F. W. Garber, M. D.
Blanche M. Haines, M. D.
H. C. Hartwig, D. D. S.
Robert Henderson, M. D.
W. D. Henderson, Uh. D.
C. L. Hess, M. D.
P. M. Hickey, M. D.
G. Carl Huber, M. D.
Melita G. Hutzel
J. B. Jackson, M. D.
C. H. Johnston, M. D.
G. L. Kiefer, M. D.
A. Leenhouts, M. D.
G. L. LeFevre, M. D.
R. E. Loucks, M. D.
Carl McClelland, M. D.
R. W. McLain, M. D.
J. G. R. Manwaring, M. D
F. B. Marshall, M. D.
E. D. Mitchell, A. M.
Helen S. Mitchell
E. D. Nesbitt, M. D.
Estelle Norman, M. D.
W. S. O'Donnell, M. D.
Miss Ostrander
J. P. Parsons, M. D.
E. B. Pierce, M. D.
F. A. Poole, M. D.
H. E. Randall, M. D.
J. A. Reeder, M. D.
U. G. Rickert, M. D.
Nathan Sinai, D. V. M.
C. C. Slemons, M. D.
John Sundwall, M. D.
F. C. Warnshuis, M. D.
Llewellyn Wilburn, A. B
W. C. Hirn, C. E.

One or more health lectures were assigned to each of the following centers:

Albion	Grand Blanc	North Adams
Alma	Grand Haven	Olivet
Ann Arbor	Grand Rapids	Onsted
Baraga	Grattan Center	Ontonagon
Battle Creek	Grosse Pointe	Owosso
Bay View	Hancock	Pentwater
Benton Harbor	Highland Park	Pittsford
Berrien Springs	Hillsdale	Plainwell
Buchanan	Holly	Port Huron
Byron	Hopkins	Portland
Calumet	Horton	Redford
Cass City	Houghton	Reed City
Charlotte	Hubbell	River Rouge
Chelsea	Jackson	Rochester
Clare	Jenison	Rockford
Cohoctah	Kalamazoo	St. Clair
Constantine	Kent City	St. Johns
Deckerville	Lansing	Sand Creek
Detroit	Lakeview	Schoolcraft
Dixboro	McBain	Sebewaing
Dorr	Manchester	Shelby
Durand	Marquette	South Lyon
East Lansing	Marshall	Three Rivers
Eaton Rapids	Milan	Unionville
Ferndale	Monroe	Vernon
Flint	Morley	Waldron
Fruitport	Muskegon	Whitmore Lake
Galesburg	Muskegon Hts.	White Pigeon
Galien	Neeley	Ypsilanti
Gobles	New Troy	

Number of speakers assigned to give health lectures	87	
Number of health lectures given outside of Detroit	189	
Number of health lectures given, Detroit	76	
Total number of health lectures assigned		265
Average attendance per lecture outside of Detroit	170	
Average attendance per lecture in Detroit	620	
Total attendance on lectures outside of Detroit	32,000	
Total attendance on lectures, Detroit	47,000	
Total attendance of all lectures assigned		79,000
Increase in number of lectures assigned this year over last year		48%
Increase in total attendance this year over last year		160%

Editorial Comments

Our members' attention is directed to two editorials that are contained in this issue that impart important opinions upon existing conditions and practices. The address of President Wilbur of the A. M. A. and his recommendations as to organizational activity and our relationship to public health movements is most timely and wholesome. The report of the Judicial Council in regard to periodical physical examinations for corporations and societies for a fee outlines a most alarming situation. This latter report was considered by the House of Delegates as a committee of the whole and brought forth a most intense discussion that revealed very clearly the extent that this work had reached. It was condemned in a most emphatic manner. Michigan must therefore rid itself of this class of work and induce its members to refrain from being associated with it. Don't sell your services to a corporation or society for a small examining fee and permit them to obtain a large profit upon your services and at the same time eliminate your relationship with your patients and clientele. Read the report and think it over.

In the past the American Medical Association, through the House of Delegates, has definitely selected its place for the holding of the next annual meeting. This action made it imperative for the administrative officers to make the arrangements for the annual meeting at the place designated. As a result they were always at the mercy of the hotel managers and business men of the place selected and immediately the price for everything was boosted and hotel rates went up. In Chicago ordinary hotel rates were boosted in some instances one hundred per cent and we were at the mercy of unions and owners of meeting auditoriums. This year the House of Delegates wisely did not definitely select a place for the next annual meeting, but only gave expression of a preference for Atlantic City. This will enable the officers to deal with the situation and if satisfactory arrangements that are reasonable in their financial features cannot be entered into they then have the authority to go to some other locality where we will not be the victims of money sharks.

Chairmen of our standing committees are notified that their annual reports that are to be submitted to the House of Delegates at the Mt. Clemens meeting must be in the hands of the Secretary not later than August 10. Please be guided accordingly.

As noted on our editorial page, we are publishing in this issue the draft of the proposed revision of our Constitution and By-Laws that has been prepared by our revision committee and will be acted upon at the Mt. Clemens meeting. Delegates and members are urged to become familiar with its provisions. The consideration of this report will come up at the first session of the House of Delegates.

Here's a suggestion that is worth while and which it might be well to request your local newspaper editors to publish for the information of the public. Might it not be well for County Societies to pay for printing it in telephone directories?

FOUR RULES FOR CALLING THE DOCTOR

To most people the telephone is simply a well-trained servant, but to the busy doctor this same telephone is a hard master—a master who never allows his servants a minute in the 24 hours when he can feel that he is not on call. This is not the fault of the telephone, but is due to the thoughtlessness of many of the doctor's patrons, and below are some hints, by a doctor, as to the remedy.

First—When your doctor, in answer to your ring, says, "This is Dr. Blank," do not say, "Is this Dr. Blank?" or "Is this the doctor himself?" Just go ahead with the conversation.

Second—If the doctor does not answer his telephone in person, give your message (if possible) to the one who does answer. Most doctors' wives and office girls are quite capable of telling him that you want him to make you a visit, or what time you will be at his office, etc. Especially, if the doctor is out making calls, this is important, because it may save him miles of traveling if your wants are known so that he can be notified.

Third—As far as possible, let your doctor alone after he leaves his office in the afternoon. He is human, like other people, likes to forget his business after he gets home at night. How can he do this if

he is called to the telephone or to make calls every evening?

Fourth—Learn what your doctor's regular calling hours are, and plan your calls so that your call is in before he starts on these rounds, thus saving his time and enabling him to serve all his patients to the best advantage.

"Yes, yes," we hear you say—"I think a doctor should go whenever he is called." Quite true, but most of the doctors' hardships, hinted at above, are unnecessary, if his patrons would only be a little more thoughtful. About four-fifths of the calls he makes and the telephoning he has to do in the evening could just as well have been attended to earlier in the day.

Our curiosity has been aroused. We are eager to attend a state meeting of our sister associations in the west. This desire is inspired by the following extracts from the program for the annual meeting of the Wyoming State Medical Society:

"First day—7:30 p. m.—The Doctor's Annual Bath. Bring your bathing suits.—Demarris Hot Springs."

"Second day—8:00 p. m.—Smoker—Big Horn Basin."

"Third day—4:00 p. m.—Leave for Buffalo Bill's Hunting Lodge. South Fork Shoshoni River. All speeches limited to five minutes. Penalty for violating this rule will be a ducking in the Shoshoni (Stinking water) River. Banquet, followed by an *all-night* dance tendered by the Cody Club.

"Fourth day—Leave for a four-day camping trip in the Yellowstone."

Some entertainment, we would say. Now, are you not also desirous of attending such a State meeting?

While in Chicago, we were interested in the Clipping Bureau of the A. M. A. This bureau receives newspaper clippings from all over the country pertaining to doctors, practice of medicine, health, meetings and personal items. The Franks murder case has attracted much attention all over the country and the mental condition of the murderers has been widely commented upon. We also were enlightened as to their mental condition by well informed individuals. It was therefore amusing to read these clippings imparting the opinions of doctors 100 to 1,000 miles distant. Inconsistent would be a mild appraisal. Why does a man venture an opinion without full information? It is that desire to rush into print, to pass out conflicting conclusions that evidence unreliability that causes much adverse criticism and ridicule. It lowers the whole profession in the eyes of the public. By contrast, attorneys throughout the country did not give interviews on the Franks case or on the points of law involved. Why will doctors thus risk their reputation for a little cheap advertising?

Correspondence

The Editor of the Journal of the Michigan State Medical Society:

In the editorial comments of our Journal, June, page 270, are some comments about Soviet Russia. It is only four months since I returned from Russia. where I spent seven years under the rule of the Soviets. I do not wonder that Emma Goldman, being an anarchist, is against the Soviet government the same as she is against the government of the United States, and why she has been deported from here and from there. But if she writes that the Russian people have nothing gained from the revolution it is not true. The peasants, who are 85 per cent of the Russian population, received freedom and the lands from pomieshchiks (bog land owners in Russia), who before the revolution ruled the country and owned the biggest and best part of the land. The workers gained still more, because through their trade unions and Soviets (councils) they control the country. When the conditions in Russia are not very good it is not because of the Soviet regime, but because of eight years continual war; three years against Germany and five years civil war against former ruling classes. In the last war on the side of the former ruling classes (counter-revolutionists) were alike the central powers (Germany, etc., and the allies, England, France, Japan, United States, Archangel expedition, Poland, Checho-Slovakia, etc. Eight years of war and unseparated companions of war: devastation, hunger, epidemics ruined the country all together. Only three years passed has Russia had peace.

For the last three years the conditions in Russia have been much improved. At present time the conditions there are of course not so good as in the United States, but better than in some other countries, like Germany, Austria, Poland, etc. In Europe, Russia is the only big country with stable currency. The new Russian currency unit Chevoutz is more stable than a French franc or even English pound and it is a par with five American dollars. The sanitary conditions there are now better than before the war; no more epidemics of cholera, thyphus and even small pox in Russia is left than in Michigan State for instance. The only epidemic prevailing now in Russia is malaria, combatting of which is very difficult on account of the enormity of the country and the lack of quinine. The present Soviet government pays more attention to preventive medicine than any other country. There is more safety in Soviet Russia than in some other civilized countries. There are less hold-ups, murders, graft, etc. than even in the United States. The economical condition in Russia, at present time bad, are nevertheless improving every day. Why the Russian people stick to their Soviet regime.

Fraternally Yours,

M. A. RIVKIN, M. D.,

The Editor of the Journal of the Michigan State Medical Society:

In one capacity or another, directly or indirectly, you are engaged in combatting preventable diseases which will cost the people of the United States this year over 3,000 millions of dollars, cause inestimable suffering and result in approximately 500,000 deaths.

Certain phases of preventive medicine are developing slowly, with consequent loss of health and life, primarily because adequately trained men and women are not available. In other fields of public health work, the personnel has increased so rapidly that there are many at work who have not had the opportunity for training which they desire.

To meet in some measure this emergency, Public Health Summer Schools will be conducted this year (at the suggestion of the United States Public improving every day. That is why the Russian people versity of California, the University of Iowa and the University of Michigan. Here all those now engaged in public health work and all planning to have a part in preventive medicine may get intensive, systematic training under leading specialists.

The announcements of the Public Health Summer Schools are now ready and may be obtained upon application. Requests should be sent directly to the universities.

Very truly yours,

H. S. CUMMINGS, Surgeon General.

The Editor of the Journal of the Michigan State Medical Society:

I regret to say that we have had the pernicious system of lodge contract practice active for years and I never could understand why any medical man would consider such a proposition, as this class of practice is unprofessional. I am surprised that these lodges fail to see that under this plan their members cannot receive proper medical service. It is a pleasure to report that recently all of the physicians here signed an agreement that none of us would engage in this class of practice, consequently this evil has been removed. This is evidence what organization can do for the benefit of the general public as well as for the profession.

I wish to thank those physicians who kindly cooperated in this important matter. These orders are no doubt excellent and will achieve success if they keep away from the lodge doctor feature. "The Moose" and "The Eagles" of Boyne City have at last been educated to the fact that these lodges cannot operate this system here.

Yours very truly,
HARRY E. SHAVER.

State News Notes

COLLECTIONS

Physicians' Bills and Hospital Accounts collected anywhere in Michigan. H. C. VanAken, Lawyer, 309 Post Building, Battle Creek, Michigan. Reference any Bank in Battle Creek.

Owing to illness in physician's family one of the finest general practices in Detroit will be sold. Cash income exceeds $20,000 yearly. Location ideal. Equipment and furnishings the best. Competition negligible. Sale price at equipment invoice is $5,000. Included are all home furnishings in situ., valuable appointments and a thorough introduction. Packard coupe optional. Lady office assistant knows entire clientele and will remain if desired.

Fees are excellent. No night calls and no confinements except at hospital. Surgical field unlimited. Ideal place for country physician of personality and ability who wants a wider field.

This is a real opportunity. No answer desired unless you are a successful physician, can come and investigate and have the money.

Possession given anytime between May 1st and July 1st. C/O Journal.

NURSES' private home, invites convalescents and invalids; best of care, fine location. R. Rs. N. Y. C. and Interurban; best of references given. For particulars write Bessie Bileth, 566 Ely Street, Allegan, Mich.

WANTED—A general practitioner for an excellent location in southern Michigan, city of 15,000 population. Excellent schools. An Episcopalian or Catholic preferred. Reply c/o The Editor.

FOR SALE—General Practice in the City of Jackson. All equipment bought in the last four years and of excellent quality. Will sell practice, with professional introduction, and equipment for invoice less 20 per cent. Practice amounts to $6,000 a year. Reply care of State Society.

Read the proposed new Constitution and By-Laws printed in this issue. It will come up for adoption at our annual meeting.

Dr. Don H. Silsby of St. Johns, will leave July 1 to enter practice in Springfield, Missouri.

Dr. and Mrs. A. Noordewier, Grand Rapids, are spending two months of travel in Europe.

The Health Officers Association of this country met in annual session in Lansing, June 17 and 18.

Dr. Ferris N. Smith, Grand Rapids, returned the middle of June from a six weeks' trip in England and France.

Advertisers discontinue ads that do not bring business. We cannot secure advertising if you fail to patronize those firms who use advertising space in the Journal. Send them your business.

The following comprises a list of officers of the Wayne County Medical Society elected at the annual meeting on May 19, 1924: Presdent, Wm. J. Stapleton, Jr. Vice-President, Herman H. Sanderson; Secretary, Richard M. McKean; Trustee, Frank A. Kelly.

W. H. Marshall of Flint, addressed the Clinton County Medical Society.

District meeting, held at Flint in April was well attended. Doctors from Wayne County and Saginaw, Lapeer, and Bay county were well repayed for attending. About 175 in all were in attendance.

The District meeting at Lapeer was attended by a few of members from Genesee it being our regular meeting prevented a larger attendance.

Offices in the First National Bank building are opened, several doctors moving into the same.

During rather a heated discussion at one of the meetings regarding placing ads in the local paper when several doctors announced their removal to other buildings Don Knapp suggested this for those who had not moved. (Dr. Blank doing business at the same old stand.)

Dr. W. A. Giffin of Deckerville, Mich., is taking two months vacation in Europe.

There will be a Phi Rho Sigma Dinner, "not too scientific," at the State Meeting at Mt. Clemens in September. Will all Phi Rho's in the State please note. The Chairman wants to know of all those who will be in Mt. Clemens.

Dr. James H. Boulter of Detroit is spending two months in Europe, after which he will locate in Los Angeles, California.

With present progress in building, the new Butterworth Hospital, Grand Rapids, will be completed by January 1st.

Remember, our annual meeting will be held in Mt. Clemens, September 9, 10 and 11. Full details in our August issue.

Dr. C. S. Davenport has recently been appointed instructor in the Department of Roentgenology, University Medical School.

Dr. C. D. Hasley of the Department of Roentgenology, University Medical School, recently resigned from the medical school to enter private practice in Detroit.

Dr. R. J. Hutchinson of Grand Rapids, will spend July and August in his camp in Canada.

Dr. John Kremer, Grand Rapids, spent three weeks in June in the St. Louis Clinics.

Dr. E. F. Merrill of the Department of Roentgenology has resigned from the University Medical School to enter the Department of X-Ray Therapy at the Mayo Clinic.

Dr. Nils Westermark of Stockholm, Sweden, was the guest of the Department of X-ray, University Medical School, for two weeks during the month of May.

Dr. Harriet S Taylor has resigned from the Department of Pathology, University Medical School, to be effective July 1st, because of ill health.

Dr. Warthin, president of the local chapter of Sigma Xi, recently entertained the executive committee, Dr. Kellogg, Professor Richtmyer, Professor Ward of the University of Illinois, Dr. Ellery of the Western Electric, Professor Eigenmann of the University of Illinois Professor McClung of the University of Pennsylvania, and Mr. C. E. Davies of New York. Addresses were made by Doctors Kellogg, Eigenmann, Professor Ward and Professor Richtmyer to the local society of Sigma Xi.

Professor Pegram of Columbia University visited the clinics and laboratories of the University Medical School recently.

Doctors Warthin and Weller are engaged at the present time in a new research on toxicity of aluminum. A research fund of $1,000 for six months was granted the laboratory by the Manufacturers' Research Company of New York.

Dr. A. S. Warthin read a paper before the Association of American Physicians on "Thrombophlebitis of Hepatic Veins" at the recent meeting of the Association in Atlantic City.

Dr. A. S. Warthin has accepted an invitation to deliver three lectures in Portland, Oregon, on June 11, 12 and 13, on the special lectureship endowment in the Medical School, University of Oregon. He will also deliver three lectures in Logan, Utah, before the Utah State Medical Society on his return.

Dr. L. M. Warfield gave a lantern slide lecture at Syracuse at the annual dinner and meeting of the A. M. P. O. Chapter at Syracuse University on "Occult Tuberculosis."

The following papers were read at the May meeting of the Association of American Physicians at Atlantic City by members of the Department of Internal Medicine: "The Value of the Electrocardiogram in the Diagnosis and Treatment of Heart Disease with Special Reference to the Significance of Abnormal Ventricular Complexes," by Dr. F. N. Wilson. "Liver Injury in Thyrotoxicosis as Evidenced by a Decreased Functional Efficiency," by Doctors L. M. Warfield and John B. Youmans. "The Nephropathic Effect of Some Amino-Acids," by Doctors L. H. Newburgh and P. L. Marsh.

Dr. Frank N. Wilson, Associate Professor in Medicine, University Medical School, has been promoted to Professor of Medicine. Doctors G. R. Herrmann and P. L. Marsh have been promoted to the rank of Assistant Professor in the Department of Medicine.

Dr. Harry Newburgh entertained Professor Petren of the Department of Medicine in the University of Lund, Sweden, during his visit at this University.

Dean Hugh Cabot has been made a fellow of the American Surgical Association.

Dr. Frederick G. Novy, Professor of Bacteriology and Director of the Hygienic Laboratory, University Medical School has been elected to membership in the National Academy of Sciences.

Dr. I. W. Greene of the Department of Medicine, University Medical School, has resigned to take up private work in Owosso.

Dr. Noel F. Shambaugh of the Department of Medicine, University Medical School, has been made a fellow of the National Research Council.

Doctors Louis M. Warfield, Frank N. Wilson, L. H. Newburgh, P. L. Marsh, G. R. Herrmann and John B. Youmanns attended the recent session of the Association of American Physicians and the Society for Clinical Investigations in Atlantic City, May 2 to May 6.

Dr. Louis M. Warfield, Professor of Internal Medicine, University Medical School, recently addressed the annual meeting of Alpha Omega Alpha at Syracuse, New York.

The monthly Practitioners' Clinics, held at the University Hospital, will be discontinued during the summer months and will re-open the second Wednesday in October. The last Practitioners' Clinic, which dealt with the use of serums and vaccines in all departments of medicine and surgery, was very well and enthusiastically attended.

The Department of Otolaryngology, University Medical School, gave a clinic to the Detroit Otolaryngological Society on April 23, 1924. The clinic was very well attended by otologists throughout the state, as well as members of the Detroit group.

Dr. H. B. Mettel of the Department of Pediatrics and Contagious Diseases has completed his service at University Hospital and will enter private practice in Indianapolis.

Professor J. Finkelstein from Berlin, was recently the guest of Dr. Cowie. Dr. Finkelstein talked to the medical faculty and student body on "The Effect of High Sugar Feeding on Acute Intestinal Indigestion."

Professor Robert Bridges, poet laureate of England, recently addressed the junior and senior classes on reminiscences of his early practice in London in the early sixties. Sir Robert Bridges was casualty physician to St. Bartholomews and physician to the Great Ormond Street Hospital for Sick Children.

Doctors D. M. Cowie, J. P. Parsons and T. Raphael have recently completed a series of investigations on "Insulin and the State of Mental Depression," which have been submitted for publication.

Miss Pauline Tessmer, Ph.C., of the Department of Pediatrics and Contagious Diseases, has accepted a position as chemist at the University of California. from Havergil College, Toronto.

Deaths

George W. Fralick, M. D., Maple City, Michigan F. A. C. S., Detroit College of Medicine and Surgery, died May 20, 1924, at the age of 53.

County Society News

GENESEE CO.

The Genesee County Medical Society met for noon luncheon at the Hotel Dresden, March 19, 1924. Dr. William Marshall, Flint, Mich., addressed the Society on "Syphilitic Aortitis." Mr. Wm. Riddell, of Hartz & Co. presented the Genesee County Medical Society with a bronze tablet, bearing the inscription: Genesee County Medical Society. Accepted by Dr. W. Winchester, President of the Society.

The Genesee County Medical Society met for noon Luncheon at the Hotel Dresden, April 9, 1924, Sgt. Eddy, representing Major-General Allen, Chairman of the American Committee for relief of needy German children, gave a short talk on this subject. The support of the Genesee County Medical Society was promised.

Following is the program for the Sixth District Meeting of the State Medical Society, held in Flint at Hotel Durant on Wednesday, April 16th, 1924 at 5 P. M.:

"Plastic Surgery of the Hand," Dr. Allen Knavel, Chicago, Ill.

"Some Pitfalls in Diagnosis," Dr. Byfield, Chicago, Ill.

"How to Avoid Malpractice Suits," Dr. Frank Tiballs, Detroit, Mich., and Mr. Barbour, Detroit, Mich.

There was an attendance of about 250 doctors from neighboring societies.

The Genesee County Medical Society met for noon luncheon at the Hotel Dresden, April 30, 1924. Dr. David R. Clark of the Detroit Receiving Hospital gave a very interesting talk on "A Practical, Modern Concept of Mental Disease."

The Genesee County Medical Society met for noon luncheon at the Hotel Dresden, May 14, 1924. Dr. Loree of St. Joseph's Hospital, Ann Arbor, Mich., addressed the society on "Hospital Organization."

Geo. J. Curry, Secretary.

IONIA-MONTCALM CO.

The Ionia-Montcalm Medical Society met Friday evening, May 16, 1924, at the Hotel Belding, Belding, Mich. Twenty members were present. Dinner was served at 7 o'clock, after which the following program was presented:

Subject, "Traumatic Diaphragmatic Hernia." Speaker, Dr. Robert Hutchinson, Grand Rapids, Mich. Dr. Hutchinson presented a most interesting and instructive paper, illustrating the talk by lantern slides and X-ray plates. This very unusual hernia followed an accident in which the patient received a crushing injury by having the automobile he was driving demolished by a train. The patient was taken to the hospital in an unconscious condition. Following a series of X-ray plates, a hernia of diaphragm was determined. Some of the plates demonstrated very clearly the position of the stomach in the left thorax reaching as high as the third rib. The hernia was approached by doing a thoracotomy, and the stomach, omentium, spleen, and part of transverse colon found filling the left thorax. Finding that the viscera could not be replaced into abdominal cavity by the thoracic route alone, an abdominal incision was made. It was found that a little traction from below made the reduction much easier. After reducing the hernial mass the tear in the diaphragm was repaired.

The patient made an uneventful recovery after passing the first three or four stormy days immediately following the operation. The patient not having been discharged from the hospital, consented to come with Dr. Hutchinson and was presented to the society for an examination, showing his excellent condition following such a severe major operation.

The society expressed themselves as being very grateful to Dr. Hutchinson for presenting this extremely interesting case.

Following this Dr. Wm. Northrup, Grand Rapids, Mich., used for his subject, "The Competent Heart." Dr. Northrup discussed the subject in a masterly manner, covering in detail the essentials in diagnosis, pathology and treatment.

Dr. J. M. Johnson of Lake Odessa was unanimously elected a member of the society.

F. A. Johnson, Secretary.

HOUGHTON CO.

On Tuesday evening, Juune 3, in place of the regular monthly meeting of the Houghton County Medical Society, a banquet was held at the Douglas House, Houghton, Michigan, in honor of Dr. Joseph E. Scallon in celebration of his fiftieth anniversary in the practice of medicine. There were twenty-six doctors present. The following program was enjoyed:

Toastmaster—Dr. W. H. Dodge.

"Dr. Scallon as I have known him"—Dr. W. K. West.

I dwell with thee: tho thou art far removed,
Yet art thou near.

Orchestra—"Hail, Hail, the Gang's All Here."

An Appreciation—Dr. H. M. Joy.

Then give to the world the best you have
And the best will come back to you.

Orchestra—"It Ain't Goin' to Rain No More."

"Dr. Scallon the Man"—Dr. J. W. Moore.

Make new friends, but keep the old;
Those are silver, these are gold.

Orchestra—"Annie Laurie."

"Facts and Fancies"—Dr. A. F. Fischer.

With such a comrade, such a friend
I fain would walk till journey's end.

Orchestra—"We Have No Bananas Today."

"Friendship"—Dr. Alfred LaBine.

I cannot pay my debt,
For all the love that he has given,
But Thou, good Lord, will not forget
His due reward, bless him in earth and heaven.

Orchestra—"There's a Long, Long Trail."

"Our President"—Dr. Charles E. Rowe.

This is the reason why all men love you;
Truth to life is the charm of art.
Other men may soar above you—
You keep close to the human heart.

Presentation of Loving Cup by Dr. C. E. Rowe.

Orchestra—"Auld Lang Syne."

Response by Dr. J. E. Scallon.

The banquet committee consisted of Doctors J. W. Moore, W. K. West, G. C. Stewart and Alfred LaBine.

G. C. Stewart, Secretary.

GRATIOT-ISABELLA-CLARE CO.

The May meeting of the Gratiot-Isabella-Clare County Medical Society was held in the Alma city hall, Tuesday, May 20. The speaker of the evening was Dr. R. Earle Smith of Grand Rapids, who read a paper entitled, "A Comparative Study of the Cutaneous Diseases of the Mouth, and then showed about 150 colored slides to illustrate his subject. The slides were certainly good, making the subject very plain.

Any County Society will be well satisfied to have Dr. Smith for one of their meetings.

E. M. Highfield, Secretary.

CALHOUN CO.

The fifth regular meeting of the Calhoun County Medical Society was called to order by President Haynes in the dining room the the Sanitarium, Wednesday, May 7th, at 8:12 P. M.

It was moved by Dr. Kingsley and seconded by Dr. Harry B. Knapp that the minutes of the preceding meeting be apporved as printed in the Bulletin. The motion was carried.

The following bills were read, all of which had been passed by members of the Board of Directors present; Post Tavern Co., cigars, $4.75; Coggan, flowers, Dr. Henderson, $5.00, Dr. Eggleston, $2.50; Phoenix Printing Co., printing Bulletin and statements, $18.00; Dr. T. L. Squier, postage and mailing Bulletin, $2.36. Dr. Godfrey moved that the bills be paid. Seconded and carried.

A communication was read from Dr. Capron suggesting that the Society extend an invitation to the Northern Tri-State Medical Society to hold the April, 1925, meeting in Battle Creek. Dr. Kingsley moved that the plan outlined be adopted and that an invitation be extended to the Northern Tri-State Medical Society to meet in Battle Creek in April, 1925. Seconded by Dr. Allen and carried.

Dr. Gesner read a report from the Necrology Committee relative to the deaths of Drs. Gillette and McLennon, as follows:

The Necrology Committee begs to report as follows:

Dr. H. E. McLennon, of Bellevue, a former member of the Calhoun County Medical Society and practitioner of Battle Creek, died April 14th, 1924.

Dr. McLennon was born in 1875 and graduated from the Detroit College of Medicine in 1900. In 1917 he was commissioned Captain in the Medical Corps, United States Army, and served in France throughout the war. While in service he contracted a chronic Antrum infection, which was indirectly the cause of his death.

Dr. McLennon was a physician of ability and a friend to tie to.

The Calhoun County Medical Society joins in offering his family our sympathy and best wishes in their bereavement.

Dr. Leon Michael Gillette, a former president of this society, died at his home in this city April 16th, 1924, of Bulbar Paralysis, the final stage of an organic brain disease. It manifested itself first in September, 1906, by a Cerebral Hemorrhage, compelling him to relinquish his practice, which he was never able to resume.

Dr. Gillette was born of French parentage in Missouri,, October 20th, 1860, and while a child came to Battle Creek with his parents. Left at the age of 11 to his own resources, he dominated his after life, ambition to achieve something worth while and an untiring capacity for work. He remained at school and supported himself by doing chores about the city and working on farms during summer vacations. After graduating from the High School, he started for Ann Arbor, arriving there without funds. He intended to prepare himself for school teaching. After two years of literary work he decided to study medicine and entered the medical department, graduating with the class of 1887. During this period he was compelled to work his way. Coming back to Battle Creek with meager funds, he began practice. After patient effort he built up one of the largest practices in this country. Too little space is afforded here to chronicle the many good things that could be said of this natural physician. He was unassuming, gentle, beloved by his patients, and by those who knew him best.

He has held every public trust that was within the gift of the citizens of this city, Coroner, Member of the School Board, Health Officer, Councilman, and Mayor.

He was always a friend and adviser of the young physician, whom he tried to assist, remembering, perhaps, his own early struggle.

It is something to ponder, what he might have achieved had he retained his health to the present day.

S. R. E.

Respectfully submitted,

WILFRED HAUGHEY
W. L. GODFREY
G. B. GESNER

Dr. Church moved that the report be accepted and incorporated in the minutes of the Society. Seconded and carried.

Dr. Clover called the attention of the Society to a bill pending in the United States House of Representatives, relative to adequate labeling of corrosives and caustic poisons. Dr. Van Camp moved that the Society go on record as favoring this bill and that the Secretary be instructed to communicate with the author of the bill and with Representative A. B. Williams to that effect. Seconded and carried.

Dr. Squier moved that an expression of appreciation and gratitude be expressed to Dr. Kingsley's son, Paul C. Kingsley, who presented the Society with a walnut gavel and block made by himself. Seconded by Dr. Wafer and unanimously carried.

The members then adjourned to the Sanitarium Chapel where an instructive program was presented by members of the Sanitarium staff, under the chairmanship of Dr. Roth.

Dr. Hubley gave a paper on Insulin, which was discussed by Doctors Murray, Clover and Gubbins. Dr. Verity read a paper on "Polycystic Kidney"; Dr. Stegman presented a paper on "Fundus Findings in Kidney Lesions," and this was followed by Dr. Jeffrey who presented a paper on "Banta's Disease." The latter paper was discussed by Dr. Stewart.

Dr. J. Kellogg said a few words of welcome and invited the Society to "come again."

Dr. Eaton moved a vote of thanks to the Sanitarium management for the entertainment. Seconded and carried.

It was moved, seconded and carried that the meeting adjourn. Attendance at the dinner, 66; at the meeting, 79.

T. L. SQUIER, Secretary.

FIFTH COUNCILOR DISTRICT

The Fifth Councilor District, under the leadership of Councilor B. R. Corbus, held its district meeting in Grand Rapids on May 26th. Clinics were held in all three hospitals, during the morning and afternoon.

At 3:30 p. m. Dr. Hugo Freund of Detroit addressed the members on the subject of Neurological and Visceral Syphilis.

A dinner was served at 6:30 p. m. and attended by some 200 doctors. After the dinner Dr. R. R. Smith gave an illustrated travelogue of his trip to Australia and New Zealand.

Dr. J. M. Finney, Professor of Surgery, Johns Hopkins College and Hospital, Baltimore, read a paper on "Recent Advances in Gastric Surgery." Dr. Finney's paper was illustrated by lantern slides.

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Original Articles

CASE OF ACRODYNIA

DAVID E. SQUIERS, M. D.
KALAMAZOO, MICHIGAN

FAMILY HISTORY

Ruth W., age three years. Father and mother living and well. Farmers. No history of tuberculosis, alcoholism, neurosis or insanity. There are three other children, ages 12, 11 and 5. All in good health.

PAST HISTORY

Birth weight six and one-half pounds. Gestation nine months. Normal delivery. Apparently normal at birth. Mental and muscular development were normal. Has had none of the contagious children's diseases.

FEEDING HISTORY

Was breast fed for 12 months. Following this had milk and mixed diet from the table. Later the child was given frequent lunches and her diet apparently consisted of milk and graham crackers, given whenever she cried. Practically no vegetables or fruit were given.

PRESENT ILLNESS

Began about Thanksgiving time, 1923. The first thing noticed by the mother was a sore on the mouth which was thought to be ring worm. Later a slight rash was noticed on face and chest. The child at this time started going down hill. Had frequent colds which terminated in an attack of Grippe. February, 1924, had a severe vomiting spell, without any known cause. Later she complained of pain in the stomach. There was much mucus in the stools and she was constipated. It was noticed that she sweat very easily, and her clothing was damp a good deal of the time. About this time there began a severe itching in the palms of the hands and the soles of the feet. Later they became very red. The condition of the hands was much more severe than in the feet. Following this the hands began to peel, and there was a slight desquamation between the toes. Hands peeled repeatedly. She became very sensitive over the entire body and screamed whenever handled. No special pain was complained of but she became very weak and was scarcely able to walk. Was very constipated, slept poorly and was extremely irritable. She was never without a cold and coughed a great deal. The chief complaints were loss of weight, extreme irritability, pain on handling, anorexia, constipation, insomnia, sweating and peeling of the palms of the hands.

PHYSICAL EXAMINATION, MAY 16, 1924

Aged 3 years. Height 34 inches. Weight 18 pounds and 3 ounces. Temperature 99. Pulse 110 and respiration 22. She was an extremely unhappy looking child. Nutrition was very poor. Skin was white and inelastic, showing rapid loss of weight. Cervical, axillary, inguinal and bronchial lymph glands were markedly enlarged. Bones and joints appeared normal. There was no swelling along the shafts of the long bones, and no swelling or tenderness about the joints. Muscles were flabby. Head eighteen inches in circumference. No bosses or craniotabes. Fontanels were closed. Hair was fine and abundant. Adenoid facies. Mouth was normally closed. Twenty teeth in good condition. There was a small white patch on the lower lip. The gums were slightly reddened, but there was no evidence of ulcerative stomatitis. Tongue slightly coated. Tonsils enormously enlarged, cryptic and infected. Chest seventeen inches in circumference. Marked rosary, but no other bony deformity. Heart was normal. Lungs normal. D'Espines to the fourth dorsal vertebrae. Spine showed a marked curve of weakness. Abdomen at the level of the ribs. No tenderness, rigidity, fluid or masses. Liver was normal in size. Spleen not felt. Slight vaginal discharge. Extremities very emaciated. Skin on the palmar surfaces of the hands was markedly red and swollen, considerable pealing of the palms and fingers, also considerable peeling between the toes. No reflex could be obtained after a prolonged trial. Nervous system extremely irritable.

LABORATORY EXAMINATIONS

Haemoglobin 85 per cent. White blood cells, 17,800. Differential count showed nothing abnormal. Urine showed no albumin, sugar, pus or acetone. Specific gravity, 1,020, highly colored.

DIFFERENTIAL DIAGNOSIS

This case shows a marked similarity to Pellagra. In both conditions there are symptoms referable to the gastro-intestinal, cutaneous and nervous systems. Pellagra, however, is more common in the south and is very rare in a child three years of age. The skin manifestations in Pellagra are invariably on the dorsal surfaces of the hands. Peeling is very rare.

Scurvy—The patient is past the usual age to manifest scurvy. There was no blood in the urine and no evidence of hemorrhage in the skin. No evidence of hemorrhage under the periosteum of the long bones. Stomatitis is common in both conditions, and is usually a marked symptom in pronounced scurvy. In this case the stomatitis was very mild.

Rickets—As in scurvy, the patient is past the usual age for acute manifestations of rickets. The fontanels are closed, there is no cranio-tabes or bossing. She has a full set of teeth. There is no deformity of the chest, excepting a slight amount of beading. Liver and spleen are not enlarged, nor are the radial epiphysis enlarged. Rickets never shows the dermatitis and peeling as in this case. While this may not be a case of acrodynia, as described by Bilderbach or Portland, Oregon, it has many points of similarity. We believe this case should be classed among the deficiency diseases or avitaminoses.

DISCUSSION

There are some who think chronic infection plays an important part in the production of this condition. Epidemics have been reported in France which would seem to support this view. In this case there may have been some absorption from the badly infected tonsils. It seems more probable, however, that the condition is brought about by a combination of chronic infections and from lack of proper hygiene and fresh foods.

The child was examined June 18, 1924, and has started to improve since being put upon a diet containing fresh meat, vegetables, eggs, with the minimum quantity of milk. She was given cod liver oil and iron and kept out-of-doors as much as possible. She has gained eight ounces in weight. Color is much better. She is much less irritable and we were able to elicit a very slight knee jerk in one leg. The hands were still slightly red, but no more peeling. The stomatitis has cleared up.

This condition is not common, but likely there are more cases than are reported. In a condition of very poor nutrition, without any special symptoms on the part of the digestive tract, great irritability, sweating, crying on handling and itching, followed by protracted peeling of hands and feet, the condition of acrodynia should be considered.

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3. Weston: Acrodynia, Archives of Pediatrics, Vol. XXXVII., No. 9, Sept. 20, p. 513.

SYPHILITIC AORTITIS

W. H. MARSHALL, M. D.
FLINT, MICHIGAN

No investigation of cardiovascular disease is complete unless we ascertain the condition of the aorta, and especially is this true if there be a history of syphilis, for it has long been known to the clinician that "Venus loves the arteries." Warthin has shown that the aorta stands first as the site of active luetic lesions. One of the first works on this subject was contributed by Francis H. Welch, of London, in the Medico-Surgical Transactions of London in 1876. The Treponema Pallidum was first demonstrated in a diseased aorta by Reuta of Munich in 1906, and a few years later, the careful studies of Warthin gave us a clear understanding of the pathological histology. More interest has been shown in the diseased aorta in the last twenty years than in all the previous history of medicine. This has been due to the discovery of the Troponema Pallidum and the elaboration of methods of staining this organism in the tissues, to the discovery of the Wasserman test, and to the painstaking investigations of the roentgenologist. As a result of this renewed interest, many more cases of luetic aortitis are reported than formerly, and we must, therefore, check our enthusiasm by remembering that other infections and other degenerations may also produce aortis. However, if a patient with aortitis admits a luetic infection, or if the Wasserman test be positive, it is reasonably safe to assume that his aortic lesion is a syphilitic one. In studying my case records for the last seven years. I have been able to collect 29 histories of patients suffering from undoubted luetic aortitis. From an analysis of these, one may arrange them into certain clinical groups with rather definite symptoms and signs.

As I am not a syphilographer, I can give you no figures of my own to prove the incidence of aortitis in syphilis. Sir Clifford Albutt, whose studies of the diseased aorta are so well known, states that the aorta is affected in over 70 per cent of all syphilitics

*Read at Calhoun County Medical Society, Battle Creek, March, 1923.
Read at Kalamazoo Academy of Medicine, May 8, 1923.

Analysis of Wasserman statistics will show that about 10 per cent of all cases admitted to the medical service of a city hospital will have a positive reaction. Longcope has shown that 74.4 per cent of aortic regurgitation cases gave a positive reaction, and that 85 to 95 per cent of aortic aneurysm cases gave a similar result.

Our ideas of when the aorta is invaded after infection have changed with the general advance of our ideas of the pathology of visceral syphilis. It was formerly thought to have been a so-called tertiary lesion. While it is true that the patient with aortitis usually consults the physician ten to twenty-five years after his initial infection, yet it is a mistake to regard aortitis as a late event in syphilis. Very early in the disease, the Treponema invades the vasa vasorum of the aorta and the heart, and swarms of these parasites infest the rich lymphatic tissues about the base of the heart and the first portions of the aorta.

While the Treponema Pallidum is the prime etiological factor in producing the disease there are other predisposing influences. Of these, age is the most important. Luetic aortitis is a disease of middle life, while arteriosclerotic aortitis occurs in later life. Longcope's studies brought out the fact that 30 per cent of his cases were under the age of 30, 50 per cent were under 40, and that 80 per cent were under 50. Only three of the patients in my series were over 50. The disease may, however, appear earlier in life, and Boas, of New York, has reported a case of luetic aortitis in a child of 13, the subject of congenital syphilis. The next most important factor is hard labor, and that is probably why there are three cases reported in males for every one in females. Many cases are found in negroes who work in our large industrial centers. It is not likely that alcoholism is a very important factor.

The gross pathology of syphilitic aortitis is much different from that due to arteriosclerosis, although at times one may find arteriosclerosis in addition to the syphilis. The lesions are most manifest in the first portion of the aorta, in the region of the sinuses of Valsalva, progressing upwards toward the arch, and declining towards the thoracic portion, beyond which the aorta is usually, but not always, smooth. There is always a considerable degree of peri-aortitis, due to the invasion of the lymphatics in the loose connective tissue of the mediastinum. No doubt some of the painful sensations of the patient are due to this involvement of the mediastinum. The intima is rough, swollen, and presents pale greyish-yellow, irregular, discrete patches of degeneration, 3 to 5 cm. in diameter. Longitudinal wrinkling, and irregular nodular swellings may be seen. The entire aorta is dilated, and is generally rigid and leathery, although thin, parchment-like areas are frequently seen where the diseased walls have yielded to the systolic shock of the blood stream. The dilation may be either local or generalized, depending on the extent of the lesions in the wall and partly on the vascular tension. The sinuses of Valsalva are markedly dilated, and with them, the aortic ring with its attached valves may be involved. The valves may show fibrous thickening and retraction, and so may become incompetent. The orifices of the coronary arteries are almost always constricted by plaques of scar tissue. True macroscopicgummata, necrotic in the center, so often seen in other tissues of the body in syphilis, are rarely found in the aorta. Calcareous deposits do not occur as frequently in the intima as in non-syphilitic arterioscelerosis. The heart will invariably show some signs of chronic myocarditis.

Microscopically, the Treponema will be found to have invaded the aortic tissues by way of the vasa vasorum. Around these parasites, in the minute vessels, are dense infiltrations of lymphocytes, plasma cells, and occasional giant cells. Many of the capillaries become obliterated, and thus the nutrition of the tissues becomes impaired. While the adventitia, media, and intima are all invaded, yet it seems to be the intima that bears the brunt of the early attack. The muscle fibres of the media degenerate, and the elastic laminae become fragmented. Hence, the medial tissues yield and the aorta becomes dilated if the process is a slow one, or an aneurysm may form if the change in the media is more rapid. When healing takes place, it is by the formation of connective tissue overgrowth from the masses of plama cells, hence the scarring and distortion.

No doubt many cases are entirely latent from the standpoint of symptoms and not rarely is an aortitis discovered at necropsy in a patient dying from some other condition. Other patients may simply have a slight effort syndrome or a cardiac irregularity. Moreover, the clinical picture may be complicated by syphilitic involvement of other viscera, as the liver, stomach, or central nervous system. While it may not be easy to draw sharp lines of demarcation between the clinical types of luetic aortitis, a classification is on some value in the study of symptoms and signs. Like many other diseases, aortitis may be acute or chronic.

The chronic cases may be further subdivided into:

1—Simple Dilation of the aorta.
2—Dilation with aortic insufficiency.
3—Angina Pectoria.
4—Aortic Aneurysm.

In my series, I found 18 cases of the first group, 3 of the second, 3 of the third, and 4 of the fourth group. It is true that these groups often overlap, for example, a patient with aortic aneurysm may also have angina pectoris. Moreover, any or all of them may be complicated by symptoms and signs of circulatory failure due to an associated myocarditis.

It is with some temerity that I classify one of my cases as an acute aortitis, for such cases appear to be rare in the literature of medicine. Harlow Brooks, in 1913, reported an aortitis diagnosed before the roseola faded. A young man of 27 consulted me in 1919 because he suspected that something was wrong with his heart. Six months before he had a primary lesion and received one dose of arsphenamin, in a neighboring city. He did not return for further treatment as the chancre had healed and he thought he was cured. He began to have slight dyspnea on exertion, and developed a dull substernal pain which became progressively worse. He was conscious of attacks of palpitation and rapid heart action, and became more easily fatigued than was usual. He began to cough and stated that, after brisk exercise, he would wheeze and expectorate much mucus. A brief synopsis of the clinical findings is as follows: He had a pale subicteric color and appeared to be ill. His temperature was 100F, pulse 130 and respirations 24. There was a slight general adenopathy, but the mucosae and skin showed no lesions. There were sibilant rales between the scapulae and moist rales at the bases of the lungs. There was dulness over the manubrim and for a finger's breadth to the right. Pulsation was seen and felt in the suprasternal notch. A soft systolic aortic blow was heard. The liver was palpable a little below the edge of the ribs. There was a slight leucocystosis and a relative lymphocysosis. The Wasserman test was quadruple plus. A careful search for other causes of the febrile condition revealed no other foci and I felt sure that the fever was due to a visceral syphilis. Upon instituting treatment, his temperatue became normal and all his symptoms and signs disappeared. I have examined him several times since, and he appears to be quite well.

Simple dilation of the aorta is the most common finding in syphilitic aortitis and clinically the most important, inasmuch as some therapeutic relief may be expected. The onset is insidious, most frequently with some dyspnea and consciousness of rapid heart action. Substernal pain always occurs in varying degrees and this pain is aggravated by exertion. A few cases have had pain at night. The pain usually radiates to the back. Such patients are very easily fatigued. On examination, one is struck by the greyish pallor of the face. The apex beat in cases uncomplicated by aortic incompetence may be in a normal position or only slightly out. Pulsation is to be seen and felt in the suprasternal notch and often in the subclavian arteries even above the clavicles. There is impaired resonance behind the manubrium and to the right. Usually, a systolic blow is heard over the aortic area and the aortic second sound is more booming than is normal. Potain, the master French cardiologist of his time, described this sound as "le bruit de tabourka," because it resembled the note of a kettle drum, and more especially that of the Arabian earthen kettle drum or "tabourka." The peripheral vessels are unchanged and the blood pressure is not high. The average of my 18 cases was only 135 systolic. The X-ray shows a characteristic elongation and widening of the aortic shadow.

The onset of aortic insufficiency in a dilated aorta is usually insidious but may be sudden. The same symptoms described under simple dilation may be present but commonly there are more pronounced symptoms of circulatory failure, more exhaustion, more dyspnae and more giddiness. Restless sleep, nocturnal dyspnea, and mental irritability have been noticeable in my cases. On inspection, one sees a marked throbbing of the carotids and a very pronounced pulsation in the suprasternal notch. Extensive and forcible precordial pulsation, displacement of the apex downward and outwards are seen if there is much left ventricular hypertrophy. The pulse is of the well known collapsing type and the pulse pressure shows an exceedingly wide excursion. A distolic murmur is heard at the base and is usually transmitted downwards and to the left of the sternum. Other well known signs of aortic insufficiency need not be described here.

When angina pectoris occurs in young or middle aged, syphilitic aortitis with coronary involvement should always be suspected. The typical syndrome appeared in three instances in my series. One patient is still living, after having had five severe attacks in the last year. The other two have died and necropsies were ob-

tained. It is somewhat difficult to say what cases have angina pectoris and what cases are simply aortitis with severe aortic pain. However, if there be sudden attacks of severe pain with a feeling of constriction, especially if coming on during exertion, if the pain radiates to the left shoulder and arm in the patient be extremely apprehensive, remaining immobile during the attack, one may safely assume that the coronary arteries are diseased as well as the aorta. The cause of pain in angina pectoris is still in dispute, Albutt stoutly maintaining that the pain is due to stretching of the aorta, and McKenzie asserting that it is due to exhaustion of the contractile power of the heart. At times the clinician will be puzzled in differentiating between angina pectoris and gastrointestinal conditions. The difficulty has been recognized by the most experienced clinicians. For example, Neusser in his monograph on Angin Pectoris says, "Radiation in the liver area can confuse angina with cholelithiasis." An excellent presentation of this subject is given by Hamburger of Chicago in the May number of the Medical Clinics of North America (1920). He states that in case of doubt, before allowing such a patient to submit to operation, a therapeutic test of Diuretin and Nitroglycerin should be made. We must be very careful not to over-emphasize syphilis as a cause of angina pectoria, for arteriosclerosis is a much more frequent cause. In Levine's analysis of the Massachusetts General Hospital cases of angina pectoris, only 7 per cent were due to syphilis.

It is rather difficult to adhere to a definite distinction between aortic dilation and aneurysm, especially in the fusiform types of aneurysm. According to Norris, the average length of time elapsing between the aortitis and a clinical aneurysm is about 16 years. The teaching of Broadbent that an aneurysm of ascending aorta is an "aneurysm of signs" while one of the transverse aorta is an "aneurysm of symptoms" is very helpful clinically. A dull precordial pain is the most common symptom of both groups. There are probably two factors in the pain, that due to pressure and erosion, and that arising from an exhausted anemic myocardium. The character of the pain is variable. Most frequently is it a feeling of tightness referred to the upper sternum but occasionally it is anginal in character, occuring in attacks after exertion. The pain may radiate to one or both shoulders. A racking, brassy cough is not an unusual complaint, and I discovered two patients with aortic aneurysm within the last three years in our city tuberculosis clinic, where relief from cough was sought. Dyspnea on exertion is usually present. In March, 1923, a patient was referred to me for investigation of the cause of a dysphagia in swallowing liquids. An aneurysm of the arch was found. Dysphagia is easily explained when one observes flouroscopically the swallowing of a barium suspension. The first swallowing movement brings the liquid to the level of the aortic arch, and when this is dilated, a feeling of obstruction ensues and a reflex cough is excited. A dysphonia or husky voice is occasionally noted and this is due to involvement of the left recurrent laryngeal nerve. Laryngosopy which should be done in all such cases, will reveal a paresis or paralysis of the left vocal cord. An intercostal neuralgia of the upper thoracic nerves will be present if the aneurysm is large and producing much erosion. The physical signs will vary with the size and position of the aneurysm. If the aneurysm is not in contact with the chest wall there will be very few signs. On percussion, there may be substernal or parasternal dullness. Dullness may also be elicited in the back in case the aneurym is large. Large saccular aneurysms of the ascending arch may produce a pulsatile bulging area in the chest wall. One should compare both pulses, for in a saccular aneurysm they are frequently unequal, usually the right radial being the weaker. This may be due to the pressure of the tumor on the trunk of a subclavian artery, or to a distortion or contraction of the opening of the vessel. An aneurysm may compress the cervical veins, impede their flow, and so produce distension. In one case seen last year, the pupils were unequal, and there was unilateral sweating of the face and neck. This is due to involvement of the cervical symphatic nerves. One should not forget to examine the lungs in all heart cases, and especially in suspected aneurysm one should compare the respiratory murmur on both sides. If a large saccular aneurysm should compress a bronchial trunk, this stenosis will make a marked difference in the quality of breath sounds. I have not been able to demonstrate a tracheal tug in all my cases even in those involving the arch. This sign is most frequently elicited when the aneurysm is a large saccular one firmly adherent to the trachea, and is rarely found in diffuse dilation of the aorta. A systolic aortic murmur is common and a diastolic one not unusual, due to dilation of the aortic rings. Hypertrophy of the left ventricle is rarely seen in luetic aneurysm, for the aneurysm per se offers no mechanical impediment to the blood stream. But as Torry points out, it does interfere with the coron-

ary circulation and so hastens the degenerative changes in the myocardium. It is astonishing how many aneurysms have few or no signs and how many there are that are only discovered by the X-ray. I recall two cases seen while in the R. A. M. C. service in 1916, in which the diagnosis was first made by the rentgenologist, and in which, even afterwards, I was unable to elicit definite signs. Rupture of aortic aneurysm occure in less than 40 per cent of all cases. At a recent meeting of the Michigan Trudeau Society, I showed a specimen from a luetic patient whose aneurysm had ruptured into the left pleural cavity.

I believe that as a routine procedure, the Wasserman test should be made in all cardiovascular cases. Hubert's statistics showed this test to be positive in 85 per cent of all cases of aortitis. It should be remembered, however, that Warthin has demonstrated the Treponema in the aortic walls of subjects, who, during life, had a negative test. If a history suspicious of lues is obtained, or signs suggestive of lues are elicited, these are just as valuable as a laboratory test.

The most important aid in arriving at a diagnosis is undoubtedly the X-ray and I believe that we invoke the assistance of the rentgenologist too seldom rather than too often, in our studies of cardiovascular disease. Vaquez and Bordet of Paris have explored the field of cardiac rentgenology most thoroughly and have perfected special methods of examination. These investigators emphasize the value of flouroscopic methods. Plates should be taken at a distance of 2 meters with a short exposure. Perhaps the earliest sign is a bulging of the ascending limb of the aortic arch, just above the curve of the right auricle. Elongation and widening of the aorta is easily seen and may be accurately measured. In some cases, the caliber may not be especially widened, but the walls show increased darkness and at times, tortuousity. Not unfrequently there is a haziness of outline of the aorta, due to periaortitis and mediastinitis. Aneurysms should be viewed and plated in several positions in order to define their exact anatomic positions.

Differential diagnosis presents few difficulties if the patient is thoroughly examined. We should remember that non-syphilitic aortitis does occur. Many cases were reported after the 1918 influenza epidemic. It is not so very uncommon in children after a severe attack of acute rheumatism. The aortitis of arteriosclerosis occurs in elderly individuals with hypertension. These cases progress less rapidly than luetic ones and the Wasserman test is negative. The X-ray usually shows no prominence of the aortic shadow to the right, but rather a lengthening and prominence to the left. In cases of aortic regurgitation, the history of acute rheumatism is important, especially if it occurs in early life. In the anginal group, the differential diagnosis is more difficult. I have already touched on the difficulties in differentiating coronary disease and gallstones. One should remember the possibility of tabetic crises, for not unfrequently tabes co-exist with syphilitic aortitis. The modern rentgenologist will rarely confuse mediastinal tumors with aneurysm, especially if flouroscopic methods are used.

Prognosis is very difficult in diseases of the aorta, should always be guarded, and frequently frave. In spite of specific treatment, unless the diagnosis be made very early, the pathological changes persist. Patients with simple dilatation may live for many years in comfort and activity if properly managed. About 50 per cent of these patients die suddenly. Aortic regurgitation of luetic origin, usually leads to a fatal termination in two or three years after symptoms develop. Prognosis is notoriously uncertain in angina pectoris, for the severity of the pain is no index of the danger, those with slight pain often dying very soon. Norris states that the average duration of life after the diagnosis of aneurysm is about two years. Aneurysm of the arch is most serious, because coronary and myocardial involvement is earlier. An aneurysm of the descending aorta may be very large and cause severe pressure pains before it causes any serious impairment of heart function. After all, the most important factor for consideration, is the condition of the myocardium.

The treatment of syphilitic aortitis calls for usual judgement, for more harm than good is done by indiscriminate treatment along routine anti-syphilitic lines which might be applicable to otherwise healthy patients. The problem in visceral syphilis is not so much that of killing the spirochetes, as it is that of endeavoring to repair damaged organs and to maintain their function. Probably some patients would live longer with their spirochetes undisturbed than with active treatment. Wile in particular, as well as Stokes, has pointed out the dangers of intensive Arsphenamine therapy. He states that acute myocardial insufiiciency often follows, as well as exacerbations of angina and aneurysms. Little good is to be expected, at least in the way of a cure, from the antisyphilitic treatment of either aneurysm or of aortic insufficiency. In cases of

aortitis occuring early in the course of syphilis routine antisyphilitic methods may be safely followed. But if there are any evidences of failure of the circulation, the patient should be put to bed for five or six weeks, his diet adjusted, and digitalis administered. I feel that in the management of syphilis we have not properly emphasized the value of rest, not only in the late stages but in the very earliest stages. Probably that is why the aorta is the organ that suffers most damage. We treat a general infection such as typhoid fever, by enjoining absolute rest, but we allow a man with a general infection of the blood stream by spirichetes to remain at work, often of a strenuous character. This does not seem quite rational. The return to work, moreover, must be gradual and an occupation selected that requires little strain. I most frequently employ the old fashioned mixed treatment in these cases, giving two or three courses a year for many years, using a mixture of biniodide of mercury and iodide of potash. Or, the mercury may be given by inunctions or injections and iodide of potash by mouth. If the patient is in good condition, and particularly if there are no signs of hepatic syphilis, Neo-Arsphenamine may be given in 0.2 gm. doses, increasing if well borne to 0.9 gm. Then the patient should have a few months freedom from specific treatment and a similar course repeated. In cardiovascular syphilis, little attention should be paid to the Wasserman findings as an indication of the success of therapy. Relief of symptoms and improvement of functions are much more reliable guides. Some patients undoubtedly become Wasserman fast, and as Wile very properly points out, are treated, not for syphilis, but for the Wasserman test. For anginal pains, nitrites may be tried, but morphine may be required. I have had no experience of the special treatment of aneurysm by wiring, but H. A. Hare, Joseph Sailer and others report good temporary results from this procedure. Probably there are few diseases that tax therapeutic skill more than the management of cardiovascular syphilis, and our only hope of doing good depends on early diagnosis.

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A STUDY OF THE DIAGNOSTIC CRITERIA OF DUODENAL ULCER

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From the standpoint of diagnosis any large group of peptic ulcer cases may be divided into four sub-groups. The first, and much the largest group, includes those cases in which there is not only clinical evidence of peptic ulcer, but also definite X-ray evidence localizing the ulcer in the duodenum. Of a series of 302 cases of peptic ulcer 214, or 70.9 per cent, fell into this group of simple duodenal ulcers without pyloric obstruction.

The second group comprises those cases in which there is clinical evidence of ulcer and direct X-ray evidence that the ulcer is located within the stomach—for example, ulcer niches, craters or accessory pockets. This group includes 36 cases, or 11.9 per cent.

In the third group are included those cases with clinical, laboratory, and x-ray evidence of ulcer complicated by benign pyloric obstruction. 22 cases, or 7.3 per cent, fell into this group. In the majority of such cases the inflammatory swelling or the mass of scar tissue has developed from an ulcer located on the duodenal rather than the gastric side of the pylorus.

In the fourth and final group are collected the 30 cases, or 9.9 per cent, in which there was no direct, localizing X-ray evidence, and in which the diagnosis was largely based upon the characteristic ulcer history. In some of the 30 cases in this last small group there was in addition to the history supporting indirect X-ray evidence, blood in the stools, etc. The majority of these cases which failed to show localizing X-ray evidence were almost certainly located in the stomach proper rather than in the duodenum.

In this study we have considered only the first of these four groups, viz., the group of ulcers in which there is definite X-ray evidence localizing the ulcer in the duodenum, and in which the ulcer is not complicated by pyloric obstruction. We have attempted to carefully analyze from the standpoint of diagnosis 140 of the 214 cases in this group. Before discussing the diagnostic criteria it is interesting to note the sex and age incidence. Seventy-six per cent occurred in men—or approximately three out of every four cases. The average age of these patients at the time of admission to the hospital was 38.8 years, with the limits of variation from 20 to 72 years. 80 per cent were between 20 and 50 years of age.

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As regards the symptomatology of duodenal ulcer, the most constant and much the most important symptom, in fact the most important diagnostic evidence of any sort, is the characteristic type of epigastric pain or distress. Definite "pain" was present in 89 per cent of the cases; and more or less characteristic ulcer "distress" referred to the epigastrium was present in the remaining 11 per cent. As a rule the pain was sharply localized in the mid-epigastrium, although some localized it a little to the right of the midline. In 18 per cent there was a radiation of this pain to the back. The important and characteristic features of the pain are, however, the conditions under which it develops, the manner in which it can be relieved, and its periodicity. These features are practically constant in all uncomplicated duodenal ulcer cases, whether the patient defines his epigastric discomfort as true pain or as distress.

In the first place ulcer pain is characterized by occurring an appreciable time after the intake of food—usually from one to three hours, or during the height of gastric digestion. Sixty-one per cent of these duodenal ulcer patients began to develop their pain 2 to 3 hours after meals, 20 per cent as late as 3 to 4 hours, and 19 per cent as early as 1 to 2 hours after intake of food. This moderate variation in the time of onset of pain can probably be explained by variations in the quantity and character of the food ingested. Ulcer pain does not necessarily occur after every meal. In the milder cases there is often no pain after breakfast; and in the more severe cases in which there is ulcer pain the latter part of the morning, the pain is often less marked than in the afternoon. In many cases the afternoon pain also tends to be more annoying than that after the evening meal. After its initial appearance ulcer pain tends to steadily increase until it reaches a maximum 3 to 4 hours after meals. Its intensity then remains unchanged for a time, after which it gradualy tends to subside as the stomach empties.

It is an important fact that ulcer pain is quite constantly absent when the stomach contains no food and retains only the normal secretions found in the fasting stomach. Pain occurring during the night in an ulcer case suggests either complication with pyloric obstruction or else a simple interference with the normal resting phase of the stomach with accumulation of gastric secretions. Twenty-four per cent of the duodenal cases without demonstrable gastric obstruction gave a history of pain during the course of the night.

In the second place the pain in duodenal ulcer is characterized by the fact that it is quite constantly relieved by the intake of food or alkali. Ninety-three per cent of these patients gave a history of definite, temporary relief of pain by intake of food. Of the remaining 7 per cent practically all had failed to try the effect of food during periods of pain because they had found such satisfactory relief from taking sodium bicarbonate. Fifty-two per cent of the entire group had discovered this method of relief by alkali. As regards other methods of relief, 13 per cent had noted relief from vomiting, and 4 per cent from reclining.

The third important characteristic of the pain in simple duodenal ulcer is its periodicity. The individual attacks of pain vary in duration from several days to several weeks or months, and alternate with periods varying from several months to one year of usually complete freedom from symptoms. The average duration of a single attack in this series of cases was about five weeks. In untreated cases there is a gradual tendency for the periods of pain to become progressively longer and the pain more marked.

As regards the total duration of the recurring periods of pain previous to our first contact with these patients, there was a variation from 1 month to 35 years. The average duration of symptoms was 7.3 years. Subtracting this period from the average age of these patients when first seen, viz., 38.8 years, it is noted that the average age of onset of symptoms was 31.5 years.

It is common knowledge that a bona fide history of either hematemesis or of gross blood in the stools is a very important point in the diagnosis of peptic ulcer, especially if associated with other evidence of this condition. A history of hematemesis was obtained, however, in only 13 per cent of these cases, and a history of melaena in only 16 per cent. Belching of gas and bloating, symptoms which are recognized as important and conspicuous in chronic cholecystitis and chronic appendicitis, are often overlooked in the history of ulcer patients because they are not of aid in differential diagnosis. Belching of gas was a definite symptom in 58 per cent of this group, and more or less bloating was noted in 45 per cent. Nausea was present in 38 per cent, but vomiting in only 22 per cent of the cases—and then only occasionally. This is quite in contrast to the high incidence and the character of the vomiting in cases complicated by pyloric obstruction.

The accuracy of the history can be corroborated and its value greatly enhanced by conducting a period of study and observation of the patient's epigastric pain, as advocated by Sippy,

using his "control tests" and noting whether the epigastric discomfort develops and disappears under conditions consistent with ulcer distress. This method of study not only affords evidence of the presence of peptic ulcer and reduces the percentage of error in diagnosis to a minimum, but it also affords evidence as to whether the patient's distress is due to ulcer. This latter information is of obvious value—particularly in cases in which there is evidence that other gastro-intestinal pathology is present.

As regards the physical examination, localized, epigastric tenderness was present in 53 per cent of the cases. In some the tenderness was quite marked, in others only slight or moderate in degree. Epigastric tenderness is very commonly present in chronic appendicitis, (which condition is often incorrectly diagnosed as peptic ulcer), and not infrequently present in chronic cholecystitis. In these conditions, however, there is apt to be associated localizing tenderness over Morris' and McBurney's points, or in the gall bladder region.

In the diagnosis of peptic ulcer, roentgenological studies we believe rank second to the clinical history and the confirmatory tests above noted. The X-ray studies usually not only corroborate and fortify the clinical impression of ulcer, but they also localize the ulcer in the duodenum or stomach, aid in the detection of pyloric obstruction, and, if the ulcer is in the stomach, determine its size, shape and exact location. This additional information is of obvious value in the treatment of the individual case. As already pointed out, we have been able in 90.1 per cent of the total series of 302 cases of peptic ulcer to demonstrate direct, localizing X-ray evidence; and helpful indirect X-ray evidence has been present in some of the remaining 9.9 per cent. In the group which we are considering at this time there was quite definite evidence of localization of the ulcer in the duodenum in every case.

The localizing X-ray evidence of duodenal ulcer consists either in the demonstration of a persistent deformity of the triangular-shaped duodenal bulb, or else of a persistent failure of the bulb to fill out at all with barium. In 96 per cent of this group of duodenal ulcer cases it was possible to fill out the bulb with barium sufficiently to demonstrate a deformity. The deformity of the bulb is due to intrinsic spasm in the great majority of cases, rather than to scar tissue deformity, or to an ulcer crater—such as one commonly sees in the case of gastric ulcer. The fact that the wall of the duodenum is thinner than that of the stomach explains why the former is more susceptible to spasm, and also why the actual ulcer craters are usually more shallow in the duodenum and more difficult to demonstrate.

Before one can definitely interpret a bulbar deformity as being due to intrinsic ulcer spasm it is necessary to rule out the possibility of extrinsic bulbar spasm secondary to appendiceal irritation or gall bladder disease. Extrinsic spasm will usually relax with proper manipulation, or after waiting 10 to 20 minutes. If there is any doubt it is wise to repeat the examination after giving atropine up to the physiological dose. This affords a very complete relaxation of extrinsic spasm, but does not relax intrinsic ulcer spasm. The persistence rather than the size of the deformity is the important criterion of intrinsic spasm.

In very occasional cases the bulbar deformity may be due to extensive ulcer, scar-tissue formation in the wall of the bulb, which may cause a complete segmentation of the barium in the bulb. In some cases it is also possible to demonstrate a minute ulcer crater in the bulb. Although intrinsic bulbar spasm is, strictly speaking, indirect evidence of duodenal ulcer, it is almost always referred to as direct evidence, because it constitutes very reliable and localizing information.

The most helpful points of indirect X-ray evidence of duodenal ulcer are, (1) gastric hyperperistalsis, (2) six-hour gastric retention of at least one-fourth of barium meal, (3) gastric hypertonus, and (4) hypermotility of the head of the barium meal. Although not individually pathognomonic, various combinations of these findings have a gratifying confirmatory value in cases with clinical evidence, but no definite direct X-ray evidence. Using Carman's rather rigid criteria for hyperperistalsis we found this sign present in over 40 per cent of our cases. This phenomenon may not be present immediately after intake of barium meal, and will be missed in some cases unless observation be continued. The second sign was present in 10 per cent of this group of simple duodenal ulcers. In these particular cases there was evidence that the six-hour retention of barium in the stomach was mainly due to spasm at the pylorus rather than to inflammatory swelling or scar tissue obstruction. The third indirect X-ray sign, hypermotolity of the head of the barium meal at the six-hour examination, was noted in 30 per cent of the cases; while the phenomenon of at least some degree of general hypertonicity of the stomach was noted in about 70 per cent.

Gastric analysis affords several types of evidence. In the first place examination of the fasting contents shows in many cases evidence of interference with the normal resting phase

of the stomach, with an appreciable increase in the volume and acidity of the fasting contents. There may also be evidence of blood in the fasting contents. In the second place fractional gastric analysis yields evidence of either a hyperacidity or a normal degree of acidity in 96 per cent of the cases. (See chart below). In the third place if patients are aspirated at the time of their epigastric pain it will be found, as pointed out by Sippy, that the acidity is usually higher than that of the specimen aspirated one hour after the Ewald Test Meal.

The following table very briefly summarizes the acidity findings with fractional gastric analysis, the exact type of curve being somewhat variable.

	Peak of free Hcl. curve	Percent. of duodenal ulcer cases
Group 1.—Marked Hyperacidity	70—100%	27%
Group II.—Moderate Hyperacidity	40— 70%	40%
Group III.—Normal Acidity	20— 40%	29%
Group IV.—Subacidity	1— 20%	4%

None of these cases of simple duodenal ulcer have shown a gastric anacidity. In the absence of pyloric obstruction the combined acid was, of course, low.

Occult blood in the stools was found in only 25.7 per cent of this series. This percentage would doubtless have been higher if therapy had been postponed until more stool specimens had been obtained and examined. A definite diagnosis was usually made on the basis of other data, and therapy started at once, without waiting to obtain more than one or two stool specimens. By examining a larger number of specimens others have reported occult blood in 50 per cent of duodenal ulcer cases. If stool specimens were examined over a long period of time, occult blood would probably be demonstrable at some time or other in a very high percentage of the cases. The chief practical value of stool examinations for occult blood in peptic ulcer cases has consisted in following the stools closely after patient is started on treatment, and noting whether the occult blood, if present, clears up under therapy.

Although this study has been concerned only with the diagnostic criteria, we may add briefly, in conclusion, that the plan of ulcer treatment which we have found most satisfactory consists:

1. In clearing up all focal infection and other possible etiological factors, so far as is possible;

2. In providing a period of rest in bed of four weeks' duration, with general upbuilding therapy during this period;

3. In local treatment of the ulcer, which has consisted essentially of the maintenance of complete and accurate neutralization of the free gastric acidity, while patient is on a milk diet with supplementary feedings; and

4. In regulating the habits of the patient after the month of intensive therapy.

FUNDAMENTALS IN PREVENTIVE MEDICINE*

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Preventive Medicine was made possible, and is based on the scientific discoveries of the last seventy years which represent a long and glorious series of successes.

The eternal search dating from the time of the ancient Babylonians and Egyptians and through the ages carried on by the Greeks, Arabians, Moors, Romans and later races, always for the golden touchstone of cure has been gradually modified into the wonderful reality of prevention that we are enjoying today.

Pollender in 1849 saw the first germ causing disease-anthrax.

Pasteur, 1860, predicted that it was within the power of man to eliminate all contagious disease.

Lister in 1878, applied the knowledge to surgery.

Koch in 1882, discovered the Bacillus Tuberculosis, the cause of tuberculosis and caused the entire rebuilding of philosophy of medicine.

Ehrlich, 1885-90, unlocked the mysteries of immunity.

Vaughan, 1885 to date, outside of his wonderful scientific work simplified, classified and popularized the knowledge of infection and immunity.

These, with many others, have given us the wonderful status of the day.

As one by one various diseases were placed in the line of causative knowledge, we found that the application of methods of control soon reduced the death rate of these respective diseases. As medicine functioned as a science the advance of preventive medicine kept pace.

Preventive Medicine rests on the following facts:

1. The discovery of bacteria as the cause of disease.

2. The outlining of the principles of immunology that is the knowledge of the methods of our systems defenses against disease.

3. The recognition of the truism that many diseases can be prevented more easily than cured.

The fundamental principles of Preventive Medicine may be summed up in the following statements:

*Read before the Houghton County Medical Society, May 6, 1924.

I. The thorough understanding of the fact that the dissemination of contagious disease is by *contact*. Furthermore that this contact is primarily accomplished by the *hands of the well* coming in contact with the *excretions of the sick,* and after such contamination conveying the infection into their own bodies by permitting the fingers to be placed into their mouths, noses, or eyes. These latter three organs are covered with red or mucous membrane which will absorb bacteria. The skin will not absorb them, it is germ proof as long as it is unbroken.

II. Germs of contagious diseases are harbored only in the *bodies* of *man* or *animals,* while innumerable species of germs are present everywhere disease germs with few exceptions are found only in the bodies of relatively few human beings and animals and it is only where they are taken from these diseased bodies and *immediately* enter another body that they reproduce the disease. If they escape the affected bodies and do not enter another body at once their life is short even in water, milk or food with very few exceptions.

III. *The individual afflicted with a contagious disease* is the only source of the disease, therefore our entire energy should be centered upon him as the menace, and we must prevent him from spreading the disease. Any germs that have left his body and spread about are of no consequence unless directly entering another body. Therefore many measures of the past like cleaning streets, back yards, privies, alleys, while appealing to our aesthetic sense, are useless as direct prevention of disease.

IV. *Carriers and missed cases* are next in importance to the cases of frank sickness. The search for these is no small portion of our work as they are a serious menace and often very difficult to discover.

V. *Infection by air route* is practically impossible, the germs themselves have no method of locomotion or travelling. Disease germs entering or deposited on any other medium than a living animal body soon die. This further emphasizes that our work must be centered on avoiding contact.

VI. *Isolation of all contagious disease.* This to be accomplished by institutional methods, but more intensively by education. Making laws is ineffective. We must teach every individual the principles involved.

VII. *This necessitates early diagnosis.* By the time the doctor sees the case it is usually too late to prevent the spread, for unfortunately the early period is often very contagious. The public must be taught the "alarm symptoms" so they may be in a position to look for help at the beginning. Every school should give courses with examination and credits covering the subjects of "How to Keep Well" "Home Nursing" and "Every Day First Aid."

VIII. *Individual not community.* The older ideas of Public Health are superseded by the newer and more powerful conception, the concentrating of our thought on the health of the individual. A community is only well and healthy in so far as their individuals are well and healthy.

IX. *Inventory or surveys* must precede all organized health work. We must first know what we have in a community before we can advise measures. Such an inventory can only be made possible by systematic annual personal health examinations. *"Have a health examination on your birthday."*

X. *Statistics for United States:*

110,000,000 population.
45,000,000 physically imperfect.
1,500,000 die annually.
750,000 die of preventable diseases.
1,000,000 cases of tuberculosis.
100,000 deaths from tuberculosis.
37,500,000 fairly healthy.
20,000,000 in full vigor.
3,000,000 on the daily sick abed list.
3 out of every 100 are ill on any one day.

$1,000,000,000 a year cost to United States to be sick, or $500,000 per hour.

XI. *Statistics to prove the efficiency of preventive measures:*

1. Tuberculosis.

1900 death rate, 181 per 100,000 in U. S.
1921 death rate, 100 per 100,000 in U. S.
1923 death rate, 90 per 100,000 in U. S.

In Framingham, Mass., where especial efforts were made for years, the death rate was reduced to 40 per 100,000. In the United States we see the death rate on tuberculosis, which had received the benefit of specific preventive work, reduced to 90 per 100,000, while the general death rate for the last twenty years was reduced only 47 to 100,000.

2. Typhoid Fever.
1909-1914—U. S. Army preventive inoculation compulsory—1 death.
1909-1914—Country at large, typhoid death rate, 16.5 per 100,000.

3. Diphtheria.
1893—Death rate, 115 per 100,000 population.
1923—Death rate, 15 per 100,000 population.

4. Panama Canal.
Under French control, 170 per 100,000 death rate.
Under U. S. control, General Gorgas, 8.9 per 100,000.

XII. *Statistics of School Children in Houghton County:*

Number of children in schools 25,000
Number that failed to make the grade..... 2,500
Cost per year to educate a child.....$50
Cost per year to county for grade failure.....$125,000

Most grade failures are due to preventable or correctable conditions.

XIII. *The Preventorium Clinic.*

From the above it naturally follows that in this county we must establish some practical measure to meet the demands of these newly found obligations. Society has progressed beyond the point, where it is willing to permit only the survival of the fittest. We believe in reversing this into the slogan *fitting the least for survival* by training him to the higher health standard. *The Preventorium Clinic will be the clearing house to accomplish this.* Furthermore we believe that it should be accomplished by having the public supply the funds. The readiest means at hand being the Christmas Seal Sale conducted annually by the Houghton County Anti-Tuberculosis Society. The last year's Seal Sale provided the funds for the carrying out of this undertaking this coming summer.

XIV. *Tabulation of Program for Preventorium Clinics:*

1. Estimation of anatomical corrections.
   a. Tonsils, adenoids, sinusitis.
   b. Teeth.
   c. Mechanical difficulties.
   d. Eyes and ears.
2. Physiological corrections.
   a. Dietary errors.
   b. Detecting deficient hearts, kidneys, livers, etc.
   c. General measures.
3. Investigating sequelae of preventable diseases.
   a. Goitre.
   b. Contagious diseases.
4. Education.

XV. *Conclusion.* We have tried step by step to develop for you the principles underlying our progress in prevention of disease, furthermore we have established a practical plan by which this can be accomplished. We ask you in turn to give us the same support that has always characterized the people of this country when they once grasped the importance of a step in the direction of promoting health. In conclusion, allow me to read you a Persian tale.

BETTER THAN RICHES

There was once a rug-maker of Persia noted for the beauty of his work, and his name was Ali Ben Sahrab.

Many buyers came and waited for him. knowing that his rugs were good; while the merchants in the market-place despised the poor weaver who had little to sell, though the little was of the finest quality.

Once late at night, as he bent lovingly over his loom these merchants came secretly to him, saying: "Why do you waste so much time over each small rug when you might make many and sell to us at a great profit?"

And Ben Sahrab answered with the wisdom of Solomon: "A good deed is better than riches, and service is above silver or gold. I am content."

MERCUROCHROME-220 SOLUBLE INTRAVENOUSLY IN CHRONIC GONORRHEA AND ITS COMPLICATIONS

Willis A. Whitman, Columbus, Ohio, (Journal A. M. A., June 14, 1924), used a freshly prepared 1 per cent solution of mercuroschrome-220 soluble in distilled water in 10 cases. Two hours after administration, the presence of mercurochrome could be demonstrated in the saliva, tears, blood serum, gastric contents, feces and urine. In ten of the cases cited, nine patients had positive gonorrheal smears, at some time, while under care, and all gave typical histories. The shortest case history was two months, and the longest, sixteen months. The average total amount of mercurochrome administered was 9.6 mg. per kilogram of body weight. The average time required for the complete disappearance of pus, in cured cases, was eight days. Six patients were discharged as cured, at the expiration of mercurochrome therapy. In two cases, a brief resumption of local antisepsis (eight and eleven days, respectively) was necessary, while the two remaining patients are still under local treatment. The rapid subsidence of symptoms in all, and the abrupt termination of symptoms in some cases, was almost incredible. The results obtained are ascribed not only to the germidical action of the mercuochrome, but, probably, as well to the inhibiting influence of the continued high temperature of reaction.

ARTIFICIAL LIGHT THERAPY IN TUBERCULOSIS

Under the influence of light, the blood in rickets shows an increased phosphorus content, and calcium deposition in the epiphyses of the long bones readily take place. The blood in tetany shows an increased calcium and phosphorus content and, clinically, the disappearance of such symptoms as carpopedal spasms, laryngospasms and convulsions after a few exposures to quartz mercury vapor radiations. Lupus vulgaris of the skin is healed by combined local and general light exposures in almost 90 per cent of cases. Extrapulmonary tuberculosis in many forms yields to treatment with sunlight and artificial light radiations. These results have been so clear cut in a large number of cases and yield so much promise that Edgar Mayer, Saranac Lake, N. Y. (Journal A. M. A., June 14, 1924), feels that a knowledge of light and its clinical applications has become a requisite not only of the physiotherapist, but also of the general practitioner. He reviews his experience during six years and discusses physical characteristics of light, protochemical action of seperate regions of the spectrum; action of ultraviolet rays on protoplasm; the physiologic action of light; the skin as an organ; and quartz mercury vapor and carbon arc lights. Brief reference is made to the use of light, more especially the mercury quartz, in intestinal tuberculosis; hilum tuberculosis; superficial tuberculosis and lupus vulgaris.

Preliminary Program of the 104th (59) Annual Meeting of the Michigan State Medical Society, Mt. Clemens, Mich., September 9, 10 and 11, 1924

OFFICIAL CALL

The Michigan State Medical Society, the Council and the House of Delegates will convene in annual session in Mt. Clemens on September 9, 10 and 11, 1924, for the transaction of such business and scientific deliberation as may properly come before the Society and as provided by its Constitution and By-Laws.

J. B. Jackson, Chairman of the Council.
Guy L. Connor, President.

Attest: F. C. Warnshuis, Secretary.

THE COUNCIL

September 9 Meeting—12 m. and 5 p. m.
September 10 Meeting—12 m.
September 11 Meeting—12 m.
J. B. Jackson, Chairman.

HOUSE OF DELEGATES

Carl Moll, Speaker, Flint.
J. E. King, Vice-Speaker, Detroit.
F. C. Warnshuis, Secretary, Grand Rapids.

FIRST SESSION

TIME: September 9, 2:oo P. M.

1. Call to Order and Roll Call.
2. Speaker's Address—Carl F. Moll, Flint.
3. President's Remarks—Guy L. Connor, Detroit.
4. Appointment of Business Committee.
5. Election of Nominating Committee.
6. Report of Committee on Revision of the Constitution and By-Laws.
   Chairman—J. G. R. Manwaring, M. D., Flint.
7. Recess.

SECOND SESSION

TIME: September 9, 7:15 P. M.

1. Call to Order.
2. Annual Reports:
   (a) The Council—J. B. Jackson, Kalamazoo.
   (b) Committee on Tuberculosis—W. H. Marshall, Flint.
   (c) Public Health—C. C. Slemons, Grand Rapids.
   (d) Legislation—Hugh Stewart, Flint.
   (e) Venereal Prophylaxis—A. P. Biddle, Detroit.
   (f) Medical Education—B. D. Harrison, Detroit.
   (g) Civic and Industrial Relations—Guy L. Kiefer, Detroit.
   (h) Public Health Education—W. T. Dodge, Big Rapids.
   (i) Delegates to American Medical Association.
3. New Business and Resolutions.
4. Adjournment.

Note:—Nominating Committee Duties—
(a) Nominate four (4) Vice-Presidents.
(b) Nominate Councillor to succeed Dr. W. H. Parks, 13th District, term expires.
(c) Three delegates to American Medical Association and four alternates.
(d) Nominate place for next Annual Meeting.
(e) Custodians of the Ballot Box for President.

THIRD SESSION

TIME: September 10, 8:00 A. M.

1. Call to Order.
2. Reports of Business and Special Committees.
3. New Business.
4. Adjournment.

FOURTH SESSION

TIME: September 11, 8:00 A. M.

1. Call to Order.
2. Reports of Committees.
3. Report of Nominating Committee.
4. Unfinished Business.
5. Adjournment.

GENERAL MEETING

September 10, 1924—9:45 A. M.

Guy L. Connor, Detroit, President

1. Call to Order.
2. Invocation: Rev. D. H. Ramsdell, D.D., Methodist Church, Mount Clemens.
3. Address of Welcome—E. G. Folsom, M. D., President Macomb County Medical Society.
4. Response—President Connor.
5. Announcements:
   (a) Committee on Arrangements.
   (b) House of Delegates.
6. President's Annual Address—Guy L. Connor, Detroit.
7. Address—"Science and Superstition."
   Prof. W. D. Henderson, University of Michigan.
8. Nominations for President.
9. Resolutions.
10. Adjournment.

SECOND GENERAL SESSION

TIME: September 10th, 7:15 P. M.

1. Call to Order by the President.
2. Music—Vocal Solo.
3. "Our Hospital Obligations" (15 minutes).
   Geo. L. FeFevre, President State Board of Registration.
4. Address—"The Profession's Relations to the Public."
   William D. Haggard, President-elect American Medical Association, Nashville, Tenn.
5. President's Annual Reception.

THIRD GENERAL SESSION

TIME: September 11th, 1:15 P. M.

1. Call to Order.
2. Report from House of Delegates.
3. Introduction of President-elect.

Scientific Section Programs

NOTE:—Chairmen will convene their Sections promptly on the hour designated. Members are requested to co-operate and avoid delay.

Papers presented before Sections become the property of the State Society and cannot be published in other Journals.

Manuscripts are to be typewritten, double spaced and are to be handed to Section Secretaries.

Scientific Program

(NOTE:—This afternoon's Session will be a Joint Meeting of all the Scientific Sections.)

1. "General Infections by Bacteria."
   Emanuel Libman, M. D., New York City.

Presentation of Clinical Cases.

Discussants:

L. H. Warfield, Ann Arbor—General Medicine.
R. R. Smith, Grand Rapids—Surgery.
Don Campbell, Detroit—Ophthalmology and Oto-Laryngology.
Reuben Petersen, Ann Arbor—Gynecology.
Guy L. Kiefer, Detroit—Public Health.

OPHTHALMOLOGY AND OTO-LARYNGOLOGY

Chairman—Wm. G. Bird, M. D., Flint.
Secretary—B. N. Colver, M. D., Battle Creek.

FIRST SESSION

September 9—9:00 A. M. to 12 M.

Dry Clinic, Harper Hospital, Detroit.

Under the direction of Dr. George E. Frothingham from twelve to fifteen selected cases will be presented by various men, giving the clinical history, the examination findings, the medical or surgical care, and indicating complications and end results, with the presentation of the patient.

The various men who attend the First Session will lunch in Detroit immediately at the conclusion of the Clinic. Following the lunch, the members and guests will go by motor to the Masonic Country Club, sixteen miles north of Detroit, and four miles south of Mt. Clemens.

SECOND SESSION

September 9—3 P. M. to 6 P. M.

Post-Graduate Lectures.
Masonic Country Club, Mt. Clemens, Michigan.

1. 3:00 to 3:40—"Etiology, Diagnosis and Management of Early Cataract."
   Dr. Edward Jackson, Denver, Colo.
2. 3:45 to 4:25—"Demonstration of a New Portable Apparatus for Testing Air and Bone Conduction."
   Dr. F. W. Kranz, Geneva, Ill.
3. 4:35 to 5:15—"Nasal Sinuses, with Lantern Slides."
   Dr. J. A. Cavanaugh, Chicago, Ill.
4. 5:20 to 6:00—"Major and Minor Neuralgias of the Head," with lantern illustrations.
   Dr. John F. Barnhill, Indianapolis, Ind.

SECTION DINNER—7:30 P. M.

Arrangements have been made for an informal great value from a social and recreational standpoint. The use of the golf course and of the bathing beach Dinner at the Masonic Country Club. All members of the Section are urged to attend. This is an innovation in our Section, but we believe that it will be of has been secured for those who wish to enjoy them. Any of the visiting ladies who wish to spend a part of either of the days of the meeting in Detroit, can get back and forth easily by interurban.

GENERAL MEETING, OPENING SESSION, WEDNESDAY, SEPTEMBER 10, 9:15 A. M.

All members of the Section are urged to be present at the General Meetings. No Section work is planned for the forenoon. Details of the Session program are given under the General Meeting.

THIRD SESSION

September 10, 1:15 P. M. to 4:00 P. M.

Address of the President.
Report of Committees.
Naming of New Committees.
Election of Chairman, 1 year, Secretary for 2 years.
Round Table Discussion.

Under the direction of Dr. D. Emmett Welsh, Grand Rapids (Eye), and Dr. Charles H. Baker, Bay City, (Ear, Nose, Throat).

In accordance with the plan followed at the 1923 meeting at Grand Rapids, the discussion will be carried on so as to bring out as many practical points as possible, with the hope that the entire membership of the Section will enter into a lively, informal discussion. There will be no record kept for publication. The value of last year's experience meeting insures a good attendance and enthusiastic co-operation.

At this meeting opportunity will be given for the presentation of instruments and of pathological specimens.

General Meeting, Public Session ..... 7:30 P. M.

President's Reception ..... 9:00 P. M.

Details of these activities are given under the General Meeting.

FOURTH SESSION

Thursday, September 11, 9 A. M. to 12 M.

Election of Officers.

1. "Systemic Causes of Deafness."
   Dr. Don Campbell, Detroit.

Discussant:

Dr. John M. Carter, Detroit.

2. "Sinusitis a Cause for Unsatisfactory Results in Tonsil and Adenoid Operations in Children," with lantern slides.
   Dr. Roy A. Barlow, Madison, Wis.

Discussant:

Dr. J. S. Wendel, Detroit.

3. "Diagnosis of Foreign Bodies in the Bronchi and Lungs in Infants and Children," with lantern slide demonstration.
   Dr. Russell S. Rowland, Detroit.

Synopsis: The importance of the history, signs and symptoms as well as Roentgen Ray and endoscopic examination. Pathology; physical signs; newer development in Roentgen Ray examinations. The importance of early diagnosis in the treatment of these conditions.

Discussant:
Dr. H. Lee Simpson, Detroit.

4. Subject to be announced.
Dr. A. C. Furstenberg, Ann Arbor.

Discussant:

5. "Irremovable Foreign Bodies in the Eye."
Dr. Geo. Slocum, Ann Arbor.

Discussant:
Dr. Edward Jackson, Denver Colo, (By invitation.)

GENERAL MEETING CO-JOINT SECTION SESSION

Thursday, Sept. 11, 1:15 to 4:30 P. M.

"General Infections by Bacteria."
Dr. Emanuel Libman, New York City.

Discussants:

1. Dr. S. H. Warfield, (General Medicine.)
2. Dr. Richard Smith, (Surgery.)
3. Dr. Reuben Petersen, (Gynecology and Obstetrics.)
4. Dr. Don Campbell, (Ophthalmology and Oto-Laryngology.)
5. To be announced. (Pediatrics.)
6. Dr. Guy Kiefer, (Public Health.)

SECTION ON SURGERY

Chairman—Henry J. Vandenberg, Gd. Rapids.
Secretary—A. C. Blakeley, Flint.

FIRST SESSION

September 10, 1924—1:15 P. M.

Chairman's Address.
Henry J. Vanden Berg, Grand Rapids.

1:30 p. m.

"Roentgen Ray Treatment of Thyrotoxicosis, with Report of Cases."
Dr. C. D. Chapell, Flint, Mich.

A comparison of fifty cases treated by X-ray, some of which have been treated surgically and some medically, others by the Roentgen Ray.

Discussants:
Dr. L. R. Himelberger, Flint, Mich.
Dr. Hickey, Ann Arbor, Mich.
Dr. Louis M. Warfield, Ann Arbor, Mich.
Dr. Richard R. Smith, Grand Rapids, Mich.

2:00 p. m.

"Studies in the Technique and Clinical Application of Sex Gland Transplantation."
Dr. Max Thorek, Chicago, Ill.

Discussants:
Dr. A. W. Hornbogen, Marquette, Mich.
Dr. A. F. Jennings, Detroit, Mich.
Dr. T. A. McGraw, Detroit, Mich.

2:30 p. m.

"Treatment of Cancer of the Large Intestine."
Dr. Walter E. Sistrunk, Rochester, Minn.

Discussants:
Dr. Max Ballin, Detroit, Mich.
Dr. John N. Bell, Detroit, Mich.
Dr. Louis J. Hirschman, Detroit, Mich.

GENERAL MEETING, OPENING SESSION, WEDNESDAY, SEPTEMBER 10, 9:15 A. M.

All members of the Section are urged to be present at the General Meetings. No Section work is planned for the forenoon. Details of the Session program are given under the General Meeting.

SECOND SESSION

September 11th—9:00 A. M.

Election of Chairman.

"Sterilization in the Feeble-Minded."
Dr. H. E. Randall, Flint, Mich.

Discussants:
Dr. C. D. Camp, Ann Arbor, Mich.
Dr. G. F. Inch, Kalamazoo, Mich.

9:30 a. m.

"Hematogenous Staphylococcus Infections of Various Organs Arising from Infected Foci in the Skin."
Dr. D. B. Phemister, Chicago, Ill.

Synopsis: The most important normal habitat of the staphylococcus is the skin. It is present in most skin infections. Hemotogenous infections in various organs and of varying degrees of severity arise from its entrance into the blood stream from the skin lesion. The relationship between the skin lesion and that in a distant organ or part is frequently overlooked. The establishment of a history of a preceding cutaneous infection is of assistance in the diagnosis of staphylococcus infections of various parts of the body.

Discussants:
Dr. Udo J. Wile, Ann Arbor, Mich.
Dr. Charles C. Jennings, Detroit, Mich.

10:00 a. m.

"Etiology and Prevention of So-Called Catheter Cystitis."
Hugh Cabot, Ann Arbor, Mich.

Discussants:
Dr. H. W. Plaggemeyer, Detroit, Mich.
Dr. W. F. Martin, Battle Creek, Mich.

10:30 a. m.

"The Surgical Treatment of Angina Pectoris."
Dr. Walter Vaughan, Detroit, Mich.

GENERAL MEETING CO-JOINT SECTION SESSION

Thursday, Sept. 11, 1:15 to 4:30 P. M.

"General Infections by Bacteria."
Dr. Emanuel Libman, New York City.

Discussants:

1. Dr. S. H. Warfield, (General Medicine.)
2. Dr. Richard Smith, (Surgery.)
3. Dr. Reuben Petersen, (Gynecology and Obstetrics.)
4. Dr. Don Campbell, (Ophthalmology and Oto-Laryngology.)
5. To be announced. (Pediatrics.)
6. Dr. Guy Kiefer, (Public Health.)

Discussants:

Dr. De Haas, Detroit, Mich.
Dr. J. G. R. Manwaring, Flint, Mich.
Dr. H. F. Collier, Ann Arbor, Mich.

11:00 a. m.

"The Drive of Civilization, Disease and Decadence."
Jos. Rilus Eastman, Indianapolis, Ind.

Discussants:

Dr. A. W. Crane, Kalamazoo, Mich.
Dr. W. T. Dodge, Big Rapids, Mich.
Dr. J. H. Kellogg, Battle Creek, Mich.

GENERAL MEDICINE

Chairman—Bruce C. Lockwood, Detroit.
Secretary—Frank J. Sladen, Detroit.

September 10th—1:15 P. M.

1. Chairman's Address.
   "Thoughts on the Modern Methods of Diagnosis and Treatment of Digestive Diseases."
   B. C. Lockwood, Detroit, Mich.
2. Subject to be announced.
   E. L. Eggleston, Battle Creek, Mich.
3. "Lead Poisoning."
   Douglas Donald, Detroit, Mich.
4. "Syphilis of the Lung."
   C. F. Karshner, Grand Rapids, Mich.
5. "Resuscitation from Electrical Shock."
   W. L. Finton, Jackson, Mich.
6. "Sympathectomy for Angina Pectoris."
   A. F. Jennings, Detroit, Mich.
7. Subject to be announced.
   Emanuel Libman, New York City.

September 11th—9:00 A. M.

8. "Digitalis, Its Uses and Abuses."
   John L. Chester, Detroit, Mich.
9. "Hypothyroidism and Its Relationship to Chloratic Anaemia."
   L. M. Warfield and I. W. Greene, Ann Arbor.
10. "Chronic Alkalosis."
    F. J. Sladen, Detroit, Mich.
11. "Clinical Significance of Jaundice."
    M. A. Blankenhorn, Cleveland, Ohio.
12. "Hemolytic Jaundice."
    C. D. Aaron, Detroit, Mich.
13. Subject to be announced.
    A. W. Crane, Kalamazoo, Mich.

General Meeting, Public Session ..... 7:30 P. M.

President's Reception ..... 9:00 P. M.

Details of these activities are given under the General Meeting.

GYNECOLOGY AND OBSTETRICS

Chairman—Walter Manton, Detroit.
Secretary—A. E. Catherwood, Detroit.

FIRST SESSION

September 10—1:15 P. M.

1. "Cancer of the Cervix. Treated with Heat and 'Starvation Ligature.'"
   G. VanAmber Brown, Detroit, Mich.
   Synopsis: Carcinoma is more vulnerable to the application of heat than to any other known agent. The use of low degrees of heat is particularly applicable to the treatment of Carcinoma of the Cervix. The value of the heat treatment is enhanced by combining it with the "Starvation ligature." This is especially indicated in the so-called inoperable and incurable cases of cancer of the uterus.
2. "Further Study of the Use of the Phloridzin Test in the Early Diagnosis of Pregnancy."
   L. W. Hayes, Detroit, Mich.
   Synopsis: A discussion of the different results obtained by different workers with this test. The importance of a definite technique, and a summary of fifty cases.
3. Subject to be announced later.
   Miles F. Porter, Jr., Detroit, Mich.

SECOND SESSION

Election of Chairman.

September 11th—9:00 A. M.

1. "The Bony Pelves of American Colored Women."
   R. W. Alles, Detroit, Mich.
   Synopsis: The comparison of the measurements of such pelves with those of the average white woman.
   The potential insufficiency of such pelves during childbirth.
2. "Some Problems in Gynoplastic Surgery."
   Alexander M. Campbell, Grand Rapids, Mich.
   Synopsis: There is a need of a more intimate knowledge of the anatomy of the pelvic fascia and the muscles of the pelvic floor. Demonstration of a dissected female pelvis. Surgical management of Cystocele and Rectocele. Lantern slides demonstration.
3. "The Management of Second Stage of Labor."
   Robert B. Kennedy, Detroit, Mich.
   Synopsis: The diagnosis of beginning of second stage. Indications for operative proceedings. Indications for forceps. Application of forceps and advantages of the different types. "Prophylactic Forceps." Indications for episiotony and method of repair. Lantern slides demonstration.

PUBLIC HEALTH

Chairman—W. DeKleine, Saginaw.
Secretary—R. C. Stevenson, Flint.

FIRST SESSION

September 10th—1:15 P. M.

The afternoon Section meeting Wednesday, the 10th, will be held with the Pediatric Section. This is not a *Joint* Meeting, as the Program, with the exception of one of the discussants, was prepared by the Pediatric Section. Because of the subjects of interest in Child Welfare and Dentistry on this program, and because of the small attendance at the Public Health Section, it was thought wise to combine in this way.

SECOND SESSION

September 11th—9:00 A. M.

1. Chairman's Address: "The Health Officer's Objective."
   William DeKleine, Saginaw, Mich.
2. "Trend of Health Education Among School Children."
   Mary Chayer, R. N., Saginaw, Mich.
3. "A Method for the Prevention of Communicable Diseases Among School Children."
   R. C. Mahaney, Owosso, Mich.
4. "The Practical Application of Mental Hygiene."
   A. Adams Jacoby, Detroit, Mich.

PEDIATRICS

Chairman—F. J. Larned, Grand Rapids.
Secretary—R. M. Kempton, Saginaw.

FIRST SESSION

September 10—1:15 P. M.

1. "Infantile Tetany with Report of Case."
   Edwin P. Russell, Ann Arbor, Mich.
2. "Adolescent Rickets with Report of Case."
   David J. Levy, Detroit, Mich.
3. "Human Milk: Factors Which Affect Its Production."
   B. Raymond Hoobler, Detroit, Mich.
4. "The Value of Quartz Light Therapy in Pediatrics."
   J. P. Parsons, Ann Arbor, Mich.
5. "Remarks on Infant Feeding."
   Walter H. O. Hoffman, Chicago, Ill.

SECOND SESSION

Election of Chairman.

September 11—9:00 A. M.

1. Intra-Cranial Hemorrhage in the New-Born."
   T. D. Gordon, Grand Rapids, Mich.
2. "Treatment of Pneumonia."
   Russell S. Rowland, Detroit, Mich.
3. "Some X-Ray Studies in Rickets."
   Preston M. Hickey, Ann Arbor, Mich.
4. "Dental Problems of Childhood from the Pediatric's Standpoint."
   Lafon Jones, Flint, Mich.
   (a) Discussion opened by Dr. Russell Bunting, Dental College, University of Michigan.
   (b) Discussion continued by Dr. J. Orton Goodsell, Saginaw, Mich.
5. "Pulmonary Tuberculosis in Childhood."
   Albert J. Bell, Cincinnati, Ohio.
6. Businness Session and Election of Chairman.

DERMATISES DUE TO COSMETICS

The use of cosmetics has become, unfortunately, more and more common. What was once considered poor form is now the mode with the average woman, certainly in the cities. Most women paint; all of them use powders of different types. Consider for a moment, says H. N. Cole, Cleveland (Journal A. M. A., June 14, 1924), the different types of poisonous preparations that go into the manufacture of far too many of these preparations —lead, mercury, bismuth, arsenic, compounds or silver, salicylic acid, resorcinol, phenol bodies, pyrogallic acid, nitric acid, calcium, barium, wood alcohol and, last but not least, paraphenylendiamin. If the public were conversant with these facts, how long would it take for the sales to drop enormously? Analysis of one hair dye showed that it contained 23 per cent of lead acetate. Severe inflammations have resulted from its use. The American Medical Association recently reported that, from another one of these nostrum hair dyes containing lead acetate, a case of lead neuritis and two cases of dermatitis of the forehead, neck and face have been reported. Lead also enters into the composition of certain face powders, a good example being lead carbonate, often called "flake white," a cheap face powder made of finely ground lead carbonate. This preparation has been guilty of numerous cases of lead intoxication. Mercury is another one of the dangerous metals used in the manufacture of cosmetics. It is employed variously —sometimes in hair dyes, like lead, but more often in face creams and skin bleaches. The American Medical Association Laboratory reports that in its analyses of bleaches and freckle lotions it has found mercuric chlorid in solution as high as 1:200, 28.2:1,000, 16.5:1,000 and 4:1,000. The metal bismuth enters more often into the preparation of so-called rice powders. Most of the so-called rice powders recommended for the face by the beauty specialists contain little or no rice. La Wall, chemist for the Food and Dairy Commission of Pennsylvania, in sixteen examinations of so-called rice powders found only two to be pure. Six contained some rice, and the rest, talc, cornstarch, zinc oxid, chalk and bismuth subnitrate. Arsenic and other dangerous drugs find a place in cosmetics. Other drugs entering especially into the manufacture of hair tonics, are salicylic acid, resorcinol and phenol bodies. Wood alcohol often enters into the manufacture of hair tonics, as well as bay rum and toilet waters. Silver compounds and pyrogallic acid enter mostly into the manufacture of hair dyes. They may endanger the patient in the same way as lead or mercury. The metals calcium and varium are employed in the manufacture of depilatories. The public has an idea that they are entirely harmless. Dermatologists have had numberless cases of dermatitis of the face or axillae from their use. The most dangerous drug of them all is paraphenylendiamin. Because it is so quick in its action, because it is so easily applied, runs a gamut of colors and penetrates deeply into the hair, it is still the common dye used in most cases. France, Germany and Austria have recognized its dangerous character and long ago prohibited its use; but they do not hesitate to manufacturue it for export to America, where it is widely used for hair dyes and fur dyes. After coming in contact with the skin, this drug sets up a severe dermatitis, often vesicular in character, and this dermatitis may spread over the entire body. The dermatitis due to this drug is very persistent, often lasting for weeks and weeks. A new use for this dangerous chemical is in the form of a dainty little box containing a mirror, a small brush and a block paste, looking like stove enamel, used to stain the eyelashes and the eyebrows, going under the name of "trepine' (Mascara) and containing paraphenylendiamin. For the last year or so, it has been the mode to employ various widely advertised preparations to sleek down the hair. Cole has seen numerous cases of mild dermatitis of the face and neck, and occasionally of the hands, from their use. There is a great and alarming increase in the dermatoses due to these various cosmetic preparations. The question is raised by Cole: What are we as a section and as physicians to do to alleviate this evil? In the first place, as physicians, all of us, and especially the general practitioner, should warn our patients of the deleterious results and of the dangers arising from the use of patent hair tonics, hair dyes, face powders, creams, etc. This is getting at the source, and will be of inestimable value. Moreover, the American Medical Association has within its power the means of rendering great service to the public in giving warning of the danger from cosmetics. This can be done, first, through the American Medical Association press bulletin, and secondly, through the admirable journal, Hygeia, which should be in every American home. No such public spirited enterprise has ever before been offered to the American public. As a scond means of combating this evil, is offered the possibliity of protecting the public through proper legislation. This should include laws to enforce the placing of the names of all poisonous ingredients on the label. Moreover, laws prohibiting the use of the most harmful types of ingredients in cosmetics would be of great value; and to these there should be added a crininal liability to enforce recognition. And in the United States, as in many foreign countries, there should be a law prohibiting the use of paraphenylendiamin as a dye for hair and furs.

The Journal
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B. R. Corbus.....Grand Rapids
J. D. Bruce.....Saginaw

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AUGUST, 1924

Report Malpractice Threats Immediately to Doctor F. B. Tibbals, 1212 Kresge Building, Detroit, Michigan.

Editorials

ANNUAL MEETING, MT. CLEMENS, SEPTEMBER 9TH, 10TH, AND 11TH

Our members and readers will find contained in this issue the preliminary announcement of the program for our annual meeting in Mt. Clemens on September 9th, 10th and 11th. Completed program and all the final details will be imparted in our September issue. At this time we urge that you note the dates of this meeting in your engagement book, or on your desk calendar and plan now to attend.

This preliminary program gives rich promises of a most interesting scientific meeting. The topics are timely and of practical interest. The profession of Macomb County are actively engaged in preparing for your entertainment and comfort. The features of entertainment and social comingling will be announced in the September issue. We have no hesitancy in stating that this Annual Meeting is going to be a most profitable and entertaining one. We urge now that you write for your hotel reservations. A list of Mt. Clemens hotels will be found elsewhere in this issue.

WOMEN'S MEDICAL AUXILLARY

Some three years ago a Woman's Auxillary Medical Asosciation was organized in Texas for co-operative work with the Texas State Medical Society. Its co-operative purpose was to aid the doctors in furthering the Association's interests and enhancing its relationship to the public. Its membership is composed of wives of physicians. Effective work was performed and splendid results were attained. These were soon recognized and other State Medical Societies caused the oganization of several auxillaries. In 1923, these several state organizations met in San Francisco and organized a National Organization under the name of the American Medical Women's Auxillary Association. This national body federates the state organizations and mobilizes them for national activities. The purposes, and organization of these auxillaries have been endorsed and encouraged by the House of Delegates of the American Medical Association.

Let us consider for a moment the value to our State Society of such an auxillary. First, it organizes into a State Association the wives of our members who form County Auxillaries. Through them there is created an avenue and a force for approach and contact with the public. Through them and by them our problems, purposes and policies can be presented to women's clubs, parent-teacher associations, guilds, schools, churches and all women's lodges and organizations and the public receives intelligent enlightenment upon medical problems and activities. We also have a means for enlisting the public's support in all local, county and state legislation. There is thus created a strong, effective organization.

Second, such an organization will enhance our State Society, for the wives of our members will inspire new interest and activity on the part of their doctor, husband members.

Third, it establishes a contact that will enable us to effectively enlist public support and aid in our constructive efforts to improve professional practice in Michigan.

We believe Michigan will profit by reason of such an organization as have so many of our sister states. We believe the time is at hand for the perfecting of such an organization. With the session of our legislature this winter such an auxillary would be of definite value. Steps should be taken for the immediate organization of this auxillary in Michigan and formal organization be perfected at the Mt. Clemens meeting. To that end then do we urge the nomination of

County Organizing Committees composed of three wives of doctor members. Please send in the names of these volunteers and we will then arrange for their meeting in Mt. Clemens. Our members must perceive the value of such an auxillary. We urge that you induce your wife to be one of the volunteers in your county. Do it today.

WISCONSIN EXTENDS INVITATION

A cordial invitation has been extended to all members of the Michigan State Medical Society to attend the 78th Annual Meeting of the State Medical Society of Wisconsin at Green Bay, August 20, 21 and 22nd.

"Wisconsin believes that many Michigan members will find it very convenient to attend our Green Bay sessions and we will consider it indeed an opportunity and a pleasure to greet them," said Mr. J. G. Crownhart, secretary of the Wisconsin Society. "We hope that members of the Michigan Society will consider this a personal invitation from their many Wisconsin friends."

The scientific sessions will be held at the Bay View Beach Municipal Building. The session Wednesday morning, August 21st, will deal with the subject of "Cancer." The Wednesday afternoon program will include Lt. Col. Harry E. Gilchrist, M. C., U. S. A., who will discuss "The Use of Chlorine Gas in the Prevention and Treatment of Certain Respiratory Diseases, with Demonstration of the Chlorine Gas Ejector." The remainder of the afternoon program will be devoted to papers on ear, eye, nose and throat. A discussion of socio-medical questions will be held Wednesday evening at Hotel Northland.

The program on Surgery Thursday morning will include "Surgery of the Billiary Passages," by Dr. C. A. Hamann, Professor of Surgery and Dean of Western Reserve University, Cleveland. The afternoon program will be devoted to Internal Medicine and includes a paper on "The Modern Meaning of Billiousness. Its Diagnosis and Management," by Dr. Frank Smithies, Chicago. The annual banquet-dance will be held at Hotel Northland Thursday evening.

Friday morning, August 22nd, will be devoted largely to papers dealing with Goiter. Dr. George Crile, Cleveland, will present a paper on "Hyperthyroidism and Hyperacidity—An Analogy" and Dr. Justin M. Waugh, Cleveland, will discuss "The Importance of Early Recognition of Serious Esophageal Lesions." The afternoon program will include a paper on "The Diagnosis and Significance of the Pathological Appendix" by B. H. Orndorf, Chicago.

Dr. R. C. Buchanan, Green Bay, will be glad to make any hotel reservations that may be desired.

UPPER PENINSULAR MEDICAL SOCIETY

The above captioned society composed of members of the profession and of the State Society residing in the Upper Peninsula of our state will hold their Annual Meeting in Sault Ste. Marie on August 13th and 14th.

This society has been in existence for many years. Its meetings have always been an event for the profession of the Upper Peninsula. Its scientific programs have ever been of high standard and interest. The fraternal spirit predominates and characterizes each annual session.

Our Upper Peninsula members are not only reminded of but also urged to be present at this year's meeting which promises to be of especial interest.

MT. CLEMENS

Mount Clemens, the county seat of Macomb County, is the largest city in the county, having a population of about 12,000.

It is situated in the southeastern part of the county on the Clinton river, two miles from Lake St. Clair and twenty miles from Detroit (city hall to city hall).

Mount Clemens is world famous for its mineral waters. These waters are pumped from drilled wells over 1,000 feet deep and are considered the strongest minearlized waters so far discovered.

The treatment consists of taking baths in this mineral water and drinking water. People from all parts of the world visit Mount Clemens, seeking health, and to provide for these there are eleven bath houses and over a hundred hotels and boarding houses. Naturally, the baths is the chief industry of Mount Clemens and provides employment for hundreds of people. However, as industries of the factory type, we have the Mount Clemens pottery, controlled by Kresge interests, and National Candy and Sugar Factory, operating in season, each one employing several hundred people.

On account of close proximity to Detroit, and which is easily reached on account of excellent street car and bus services and by automobiles on account of the wide and well paved Gratiot road, hundreds seek employment there.

However, life in Mount Clemens is cosmopolitan. People are here from all parts of the country. Mount Clemens is a city of homes,

a majority of residents owning their own homes. These are exceptionally well kept up, as are the streets of the city, and all these combined with the excellent public utilities services—D. U. R. street car, buses, Edison Electric, city gas, telephones, sewage disposal, excellent city water from wells, schools—a new million dollar high school just being completed —churches, business places, etc., make an attractive and pleasant place to live, and accordingly Mount Clemens is having a steady growth.

V. H. Wolfson, M. D.

COMMITTEES FOR MICHIGAN STATE MEDICAL SOCIETY, MOUNT CLEMENS, SEPTEMBER 9-10-11- 1924

1.—Meeting Places
E. G. Folsom J. M. Croman, Jr.
V. H. Wolfson

2.—Hotels and Bath Houses
J. M. Croman, Jr. V. H. Wolfson
E. G. Folsom

3.—Entertainment
R. Ullrich H. Wiley
W. Kane T. P. Russell
A. A. Thompson G. F. Moore

4.—Reception
G. Perrson W. Norton
F. K. Lenfestey W. Kane
A. B. Allen R. Ullrich

5.—Ladies' Entertainment
S. B. Montique R. Greenshield
R. Turner C. E. Greene
A. J. Warren M. C. Cronin

6.—Exhibits
W. Norton G. F. Moore
A. J. Warren E. G. Miller
J. P. Letts J. E. Curlett

7.—Automobiles
M. Smith C. M. Mann
A. A. Thompson W. Kane
J. E. Curlett A. J. Warren

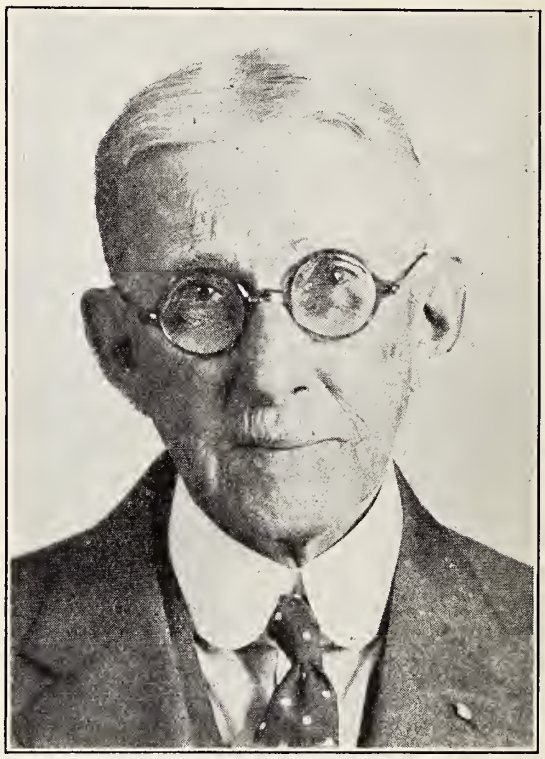
8.—Finance
J. M. Croman, Sr. H. G. Berry
A. B. Bower J. G. White
M. C. Cronin F. Scott

9.—Decorations
A. A. Thompson L. Allen
M. Smith W. Sharpe
T. P. Russell J. Seaman

MACOMB CO. MEDICAL SOCIETY

The Macomb County Medical Society was organized and became a component part of the Michigan State Medical Society at a very early date and at the time the State Society was reorganized continued as a member and has been in active existence ever since.

At the present time there are thirty-four members. Meetings are held monthly except in July and August—usually a noonday luncheon. Papers are read, cases presented and matters pertaining to the Society are taken up and decided.



President Edward Graham Folsom, M. D., was born at Utica, New York, May 25, 1854. Graduated in medicine, March 5, 1877. Practiced in Mount Clemens since 1884, a consecutive period of over forty years. Dr. Folsom has always been deeply interested in public and civic affairs and as such has served his community honorably and creditably in various capacities, among them having been Secretary of the Pension Board, Postmaster of Mount Clemens, Surgeon Examiner for Draft Board during the late war, Coronor for Macomb County and Health officer of Mount Clemens for thirty years and is still Health Officer. Dr. Folsom has always been active in the Society and has always stood ready to give his services to every member thereof unstintingly, accordingly he is beloved by every member and in honor thereof a testimonial dinner was given him last winter and at the annual meeting was the unanimous choice for for president of our County Society—a fitting honor for the dean of the Society, especially at this time when the County Society has the privilege and pleasure to entertain the State Society.

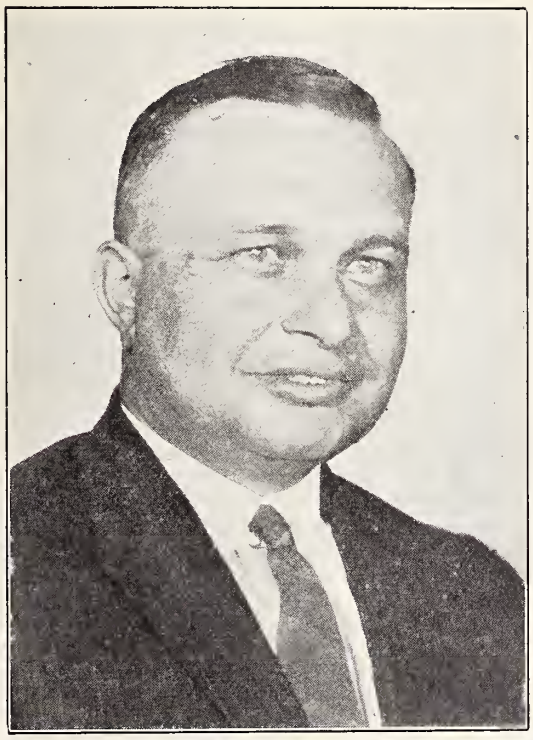
The attendance at the meeting has been very high, considering the fact that members are in all parts of the county and must make trips in some cases of over twenty miles to attend, so with an attendance of around sixty per cent is something we feel proud of.

The entire membership of the Society stand ready to assist and aid in every way the recommendations that may be asked for from the Councillors of the Society.

At this particular time every member extends a hearty invitation and welcome to every other member of the Michigan State Medical Society to be with us during the State meeting to be held September 9, 10, and 11, 1924.

The officers for the year 1924 are:

E. G. Folsom, M. D., president; M. Croman, M. D., vice president; R. Ullrich, M. D.,



Secretary Victor Hugo Wolfson, M. D. was born in Port Hope, Huron County, Michigan, August 20, 1885, graduated from Mount Clemens High School; graduated in medicine, 1909, since which time has practiced in Mount Clemens.

treasurer; V. H. Wolfson, M. D., secretary; V. H. Wolfson, M. D., delegate; F. K. Lenfestey, M. D., alternate.

V. H. Wolfson, M. D., Secretary.

HOTELS OF MT. CLEMENS

Park Hotel. Colonial Hotel.
Olympia Hotel. Elkin's Hotel.
Plaza Hotel.

We are advised that the above hotels will give a special rate of $5.00 per day, American plan, (room and meals) to all registered members.

The Murphy Hotel.
John R. Murphy Hotel.
Arethusa Hotel—

Will give a special rate of $2.00 per day, European plan. The Medea Hotel will give a rate of $2.00 up, per day, European plan. It is recommended that you write at once for reservations.

Editorial Comments

What you should know:

1. The Annual Meeting is on September 9th, 10th and 11th at Mount Clemens.
2. Mt. Clemens is but 21 miles from Detroit and may be reached from Detroit by interurban, Grand Trunk R R. or by auto by driving out Gratiot avenue which is a paved road all the way into Mt. Clemens.
3. The House of Delegates meets at 2:00 p. m., September 9th. Your county delegates should be on hand promptly at this first session.
4. Section Programs will be opened promptly on the hour designated. Don't straggle in.
5. Many distinguished guests from out of the state, including Dr. W. D. Haggard of Nashville, Tenn., president-elect of the American Medical Association, will be present to address the General Meetings and Scientific Sections.
6. Macomb County Physicians are planning most pleasant entertainment features.
6. Hotel accommodations are ample but we urge that you make early reservations.
7. Mt. Clemen's baths are free to all members. Don't fail to take one of these sulphur baths—it's not all brimstone.
8. Section Officers have prepared exceptionally strong programs. They cover a range of subjects that are of intense practical value. You are bound to profit by these discussions.
9. On Thursday afternoon there will be a General Combined Meeting of all the Sections. The invited speaker from New York is a distinguished Clinician, an able diagnostitian and a fluent talker. His Clinic with illustrative cases and the ensuing discussion by the selected representatives of our Scientific Sections assure the success of this new feature of our Annual Meeting.
10. Note the dates—you cannot afford to forego the Mt. Clemens meeting. Make your hotel reservation now.

There has been considerable discussion bearing upon the need of periodic physical examination. To educate the public in regard to the value of periodic examinations is probably one of the most difficult features. In this issue, under County Society News, will be found the plan that is being advanced by our members composing the Hillsdale County Medical Society. Arrangements are under way for conducting, sometime this fall, a competitive physical examination movement during which the members volunteer to examine all high school students and awarding prizes to the students who rate the highest. This is a most commendable activity and it is hoped that it may be conducted throughout the state by most of our County Societies.

Anent the Frank case which is still receiving considerable newspaper publicity, a certain preacher delivered a sermon concluding that if these boys had been made to go to church they would not have developed the mental defect that induced their crime. Of such stuff are preachers made. In ignorance do they pass judgment. We quote Dr. Barker: "If the public could be informed of the prevalence of abnormal thought, feeling and behavior, such indifference as now exists regarding prevention would become inconceivable. If the public fully realized how much insanity, mental deficiency, criminality and incapacity for social effectiveness actually exists and how easily much of these could be prevented by the adoption of wide measures that are practicable, one cannot but feel that the apathy would be displaced by activity and that a vigorous prophylactic campaign by legislation would be peremptorily demanded."

Until mental deficients are prohibited from reproducing we will have repetitions of "Franks crimes." The Bible or church will not remove the stigmata.

The American Medical Association Bulletin is sent every two months to the Fellows of the Association. In it there is a discussion of medical and economic problems. It is the open forum of the Association. The June number was issued in two

parts. The second part is devoted entirely to a splendid article by H. E. Kelly a Chicago attorney on the "Regulation of Physicians by Law." Every physician should read it for it will enable you to intelligently discuss with your clientele and legislators the points involved in cult and other types of practices.

In reviewing the use and value of vaccine, Norman McCaskie concludes with this statement: "There are fashions in treatment and few of us who have been in practice for over twenty years can look back with quite clear consciences on our attitude towards them. Vaccine therapy today is the fashion of the moment. It has captured the general public; our patients expect it and reproach the man woh does not employ it as being behind the times. This reacts on us, and there is hardly a bacterial infection in which we feel that we have exhausted the last means of treatment unless we make use of a vaccine. It is fatally easy—and very profitable—but it lends itself to exploitation. There will be a reaction, and a prejudice will arise against a method of treatment which though yet in its infancy and hardly as yet of general application, holds great promise for the future." We cannot agree with the last sentence unless doctors discontinue the exploitation and limit the use of vaccine to positive indication for scientific administration.

Two years ago when Dr. W. T. Dodge was elected president we commented upon his virtues and remarked that his only fault was "a poor game of golf and choice language upon the greens." We were taken to task for these remarks by Dr. Dodge and we promised that we would retract through these columns whenever he was able to beat us. As a consequence we have had many invitations to play. Dr. Dodge even went on the Golf Special to California hoping for a golden opportunity. He admitted that to beat us was his one ambition during the past two years. Fate was kind to him. Persistency was rewraded.
On June 22nd he evidently found out we had not played for three weeks. In addition the mower on his course was out of commission and the fair-way was a hay field. The greens were mountainous, concrete formations—when we were insistently urged to come up to Big Rapids, we did. Result: He beat us on total score but not on holes. We lost $21 and six balls to him. Satisfaction has been accorded. He's still chuckling.

Dietetics merits more thought on the part of the physician than has been given to it. Balanced food intake with modification as the individual's needs indicate, will do as much to achieve a return to normal as will medication and surgery. People are learning the value of proper diets and are demanding intelligent guidance from their doctor. Texts on diet and food values are as a rule tiresome, difficult reading and study—still one must dig out the general principles from these texts. Having done so, he will then find that he will be well repaid for his subscription to "Dietary Administration and Therapy," a monthly magazine published in Cleveland under the direction of the Hospital Dietetic Council. This publication is a most helpful one, and will be of material assistance in your daily practice.

Section officers have determined that all section meetings will be called promptly on the hour set and will be adjourned promptly. The last two years we have become negligent in this. In starting each session promptly, its program can be completed with plenty of opportunity left for social visiting. Promptness is going to be the watch-word for our Mt. Clemens meeting.

Delegates are again urged to be present on Tuesday afternoon. Most of the work of the House of Delegates can be accomplished Tuesday afternoon and evening. If you represent your local society as you are expected to, please arrange to be in Mt. Clemens on Tuesday afternoon, September 9th.

Don't fail to write for your hotel reservations. A list of Mt. Clemens Hotels will be found in this issue.

As most of our readers know, this is what is commonly termed, Presidential Election Year. Besides a nation's president, there are to be elected senators, congressmen, governors, state legislature senators and representatives, county and civic officials. To exercise one's right of franchise we understand that it is imperative for every voter to re-register in his voting precinct. To fail to do so bars him from voting at the coming election. The Journal does not plan or purpose to enter into any of the political debates, nor will it sponsor any candidate. The Journal is concerned, however, to the extent of desiring to urge every member to acquit himself of his citizenship responsibility to vote. To that end do we urge that if you have not already done so, that now, ere the registration lists close, you go to the registration board and record your name and address. The greatest slacker is that individual who fails to register his vote on election day. Let that not be said of any Doctor in Michigan.

Correspondence

The Editor of the Journal of the Michigan State Medical Society:

Will any and all doctors, former residents of Illinois, or descendants of pioneer physicians of the "Illinois country," communicate at once with the Committee on Medical History, Illinois State Medical Society, No. 6244 North Campbell Avenue, Chicago, Illinois?

Under the sponsorship of the Illinois State Medical Society there is in preparation "A History of Medical Practice in the State of Illinois" that must go to the printer at an early date. In order that this volume may be accurate and complete, all possible assistance is asked from every source, as to personal data and experiences, including diaries, photographs and similar documentary mementoes of pioneer Illinois doctors and of progressive phases of medical practice, as well as of achievements in fields other than those of medical science. Prompt return in good condition is promised for anything loaned the committee, the personnel of which is:

O. B. Will, M. D., Peoria, Ill.; C. B. Johnson, M. D., Champaign, Ill.; Carl E. Black, M. D., Jacksonville, Ill.; George A. Dicus, M. D., Streator, Ill.; James H. Hutton, M. D., Chicago, Ill.; Chas. J. Whalen, M. D., Chicago, Ill., Chairman.

The scope of the volume will range from the discovery of Illinois to modern times. Through this period of over 250 years there is much of thrilling interest to be detailed. Collection of the human interest data can come only from the families or closest friends of the pioneers, many of whom long ago removed to distant sections of the

United States. Through the kindness of editors of various medical journals, it is hoped to reach those who may be able to loan valuable material to the compilers who guarantee careful guardianship of anything sent for publication.

Some of the subjects touched will be: Physicians accompanying early explorers; government surgeons and physicians in attendance at the forts; early medicine in Illinois; theories of healing from the days of the Aborigines through the mound-builders; French and English explorers; the ante-boundary days; sporadic settlers; medical attendants for the covered wagon; herb doctors; primitive surgery; medicine and missionaries; migration of pioneer physicians to new territory; the circuit riding and "saddle-bag" doctors and their burdens, triumphs and perils; pioneers as "utility citizens"; Illinois men in war time—there are four conflicts to be considered since the opening of the Nineteenth Century; Illinois medical men away from medicine, i. e., in industry, in science, in belles-lettres—art, music and literature.

Photographs especially are desired. Also copies of letters. statements of "cures" and "new methods," diaries and the like.

The Editor of the Journal of the Michigan State Medical Society:

I have just received the July number of the Journal of the Michigan State Medical Society and am very greatly interested in the draft of the proposed new Constitution and By-Laws on Pages 306 to 312.

You will perhaps recall that in my report to the House of Delegates I drew attention to the need for more specific provision for the control of members of state associations. In other words, I pointed out that it seems necessary that when county medical societies take into membership those who, under certain circumstances, are not desirable from the standpoint of the state association, there should be some provision made whereby the state association can control the situation with respect to such members as it may not consider desirable.

A case in point has recently arisen in a state association whose secretary reported to this office for enrollment the name of a physician who has been a flagrant advertiser of a drug cure, so-called, made and sold by this particular physician. By virtue of this man's membership in the state association concerned, he became a Fellow of the American Medical Association. When my attention was called to the Judicial Council, and by action of that Council, the man's name was promptly removed from the Fellowship roster of the American Medical Association. Of course, I communicated with the secretary of the state association who in turn advised the secretary of the County Medical Society concerned about the matter. The secretary of the County Medical Society replied to the state secretary that this man was a member in good standing in the County Society, that he had the esteem and respect of the community in which he lived and of his fellow members in the County Society.

This year the County Society's secretary reported this man's name to the state secretary for enrollment. The matter was presented to the State Council who ordered that the dues for the gentleman be returned to the County Secretary and that the County Society be asked to show cause why this man's dues should not be refused by the State Association. The County Society replied, in effect, just as the County Secretary had previously replied and the State Association kept the advertiser's name on its membership roster.

I note that Section 2 of Article 4 of your proposed new constitution provides that the membership of the State Association shall consist of members in good standing in the component County Society. I also note that Chapter I of the By-Laws provides that all members of component societies not in arrears for dues shall be eligible to any office within the gift of the State Association and that the name of a physician on the roster of members of a chartered County Society shall be prima facie evidence of his right to register at the Annual Session of the State Association. In Chapter 11, Section 5 provides that the County Society shall be the judge of the qualifications of its own members. It is also provided that charters shall be issued to the County Societies by the State Association.

I fear that the draft of your new Constitution and By-Laws leaves an opening for the same sort of situation to develop in Michigan which has been described in this letter. I fully realize that the questions here raised are delicate questions and difficult to adjust satisfactorily and I have written this letter simply to call your attention to the matter so that you may think it over carefully.

I note in Section 2 of Chapter 11 of the proposed new By-Laws that the "Code of Ethics" of the American Medical Association is referred to. There is no longer a Code of Ethics. The Principles of Medical Ethics of the American Medical Association replaced the code some years ago.

By the way, it seems to me desirable that each County Society and each State Association should adopt the Principles of Medical Ethics of the American Medical Association or some similar instrument.

With my sincere good wishes, I am

Very truly yours,

Olin West, Secretary.

The Editor of the Journal of the Michigan State Medical Society:

I have read with interest the article in "The Bulletin" as of July 7, 1924, "Children Improved by Habit Clinic." I feel certain that the medical profession of this city and state will be interested to know that such a Clinic is being and has been conducted at the Children's Hospital of Michigan for the last three months. We are anxious that all physicians and hospitals take advantage of this activity if they so desire. We therefore invite you to refer to this Clinic any little individual whom you consider a subject for such study. (This is a Free Clinic as is all other departments of the "Out Patient Department"). Dr. Irwin H. Neff, the physchiatrist in charge has to offer the following for your information:

"The importance of correcting undesirable habits in normal children is recognized as an important feature in the treatment of childhood ailments. The correction of abnormal tendencies in children may prevent the development of functional nervous troubles or mental invalidism in adult life. Some of the conditions in children that would suggest the use of a habit clinic are disturbances of sleep, lack of normal appetite, speech defects, convulsive attacks, headaches and many miscellaneous nervous habits—to these should be added what may be termed personality traits such as fears, day dreaming, pugnacity, shyness, whining and crying, oversensitiveness, obstinacy, unusual sex manifestations—and in the category of habits we must include the following social conduct, viz: lieing, running away, stealing, destruc-

tiveness, sex assaults and sex perversions, cruelty, etc.

"All of the above states may be due to habit not connected with physical disease and conversely may be related to or initiated by bodily defects or disfunction.

"The basic cause for the development and the reason for the continuation of childhood habits should be discovered; the detection of the cause and institution of appropriate treatment is a medical problem the importance of which should not be underestimated."

Let me quote from Dr. Thom's article. Dr. Thom says, in concluding his report:

"There can be no question as to the practical value of clinics whose chief concern is the study of the mental health of children. Childhood is not only the opportune time but the only time to inaugurate a program of mental health.

"Seeds of pugnacity, selfishness and feelings of inferiority are sowed early. They may not bear fruit until later—perhaps not at all; but if one expects to reap the blessings of an adequate, well-rounded and self-sufficient type of personality in an offspring, the seeds must be planted during the earliest years and carefully nurtured."

I wish also to say at this time that there is in operation at our hospital a "Cardiac Clinic" where all children coming under the heading "Cardiacs" are studied, classified, treated and instructed.

We cordially invite you to use this department also. These two departments, we believe, are great "Prevention Clinics."

Very cordially,
M. B. Bay, Director.

State News Notes

COLLECTIONS

Physicians' Bills and Hospital Accounts collected anywhere in Michigan. H. C. VanAken, Lawyer, 309 Post Building, Battle Creek, Michigan. Reference any Bank in Battle Creek.

NURSES' private home, invites convalescents and invalids; best of care, fine location. R. Rs. N. Y. C. and Interurban; best of references given. For particulars write Bessie Bileth, 566 Ely Street, Allegan, Mich.

The Western Michigan Travel Club held its annual social outing at Big Rapids on July 30th, as the guests of Doctors Dodge and Lynch.

Dr. G. L. McBride, Grand Rapids, is spending the summer at his cottage at Macatawa Park.

Dr. G. H. Southwick, Grand Rapids, will spend the month of August at the camp of Dr. R. J. Hutchinson in northern Canada.

Dr. Guy L. Connor, Detroit, will spend the month of August at Mackinaw City.

The Corner Stone of Butterworth Hospital, Grand Rapids, was laid with appropriate ceremony on July 23rd. A copy of our State Journal was among the documents placed in the stone.

Upper Peninsular Medical Society will hold its annual meeting in Sault Ste. Marie, August 13 and 14.

During commencement week the Psychopathic Hospital at Ann Arbor was visited by Dr. George M. Kline of Boston. Doctor Kline was formerly First Assistant Physician at the Psychopathic Hospital and is now Commissioner of Mental Diseases for the State of Massachusetts.

In connection with the Summer School of the University of Michigan, Dr. Albert M. Barrett is giving a course of ten lectures on Psychiatry in relation with public health problems. About thirty-five physicians, nurses and public health officers are attending this course.

At the meeting of the American Psychiatric Association recently held at Atlantic City, Doctor Theophile Raphael, first assistant physician at the Psychopathic Hospital, Ann Arbor, presented a paper on "The Kottmann Reaction in Neuro-Psychiatric Diagnosis."

Dr. Albert M. Barrett, Director of the Psychopathic Hospital, University of Michigan, has been elected President of the American Psycho-pathological Association for the coming year.

Dr. Theophile Raphael will spend the next two months in study in New York and Boston.

Mrs. H. S. Mallory, Director of Social Service at the State Psychopathic Hospital, attended the annual meeting of the National Conference of Social Work held recently at Toronto.

Dr. A. M. Barrett, Director of the State Psychopathic Hospital, addressed a joint meeting of the Ingham County Medical Society and Bar Association at Lansing on the evening of May 15th. The subject of his address was "The Psychopathic Aspect of Behavior Problems."

Dr. Albert M. Barrett, Medical Director of the State Psychopathic Hospital, has been appointed a member of the Board of Medical Consultants of the U. S. Veterans' Bureau.

Doctor L. D. Stern, Instructor in the Department of Internal Medicine, University of Michigan, has resigned, to enter general practice in California.

Doctor N. M. Alter, Instructor in the Department of Internal Medicine, Univeristy of Michigan, has been appointed Professor of Pathology in the University of Colorado.

Doctor William Smith of the Department of Neurology, University of Michigan, has been appointed Instructor for the ensuing year.

During the past month Doctors Arthur Markley of Denver, Colorado, Marcus Haase of Memphis, Tennessee and John H. Stokes of Philadelphia, Pennsylvania, have been the guests of Dr. Udo J. Wile of the Department of Dermatology, University of Michigan.

During the recent meeting of the American Medical Association in Chicago the following papers were presented by the Department of Dermatology of the University of Michigan: "Universal Leukemia Cutis" by Doctor Keim before the Dermatologic Section. "Tryparsamide in the Treatment of Central Nervous System Syphilis," by Dr. Wile and Dr. Wieder.

At the meeting of the American Dermatological Association held in Minneapolis, Dr. Wile read

a paper on "Familial Study of Three Unusual Cases of Congenital Ichthyosiform Erythroderma."

Dr. Udo J. Wile of the Department of Dermatology, University of Michigan, has been re-elected secretary-treasurer of the American Dermatological Association. The name of Dr. Harther Keim was proposed for membership in the American Dermatological Association.

The University of Michigan Pediatric and Infectious Disease Society held its annual meeting June 2, 1924. The following papers were presented: "The Management of the Physically Defective Child in the Public Schools"—Paul Beavin, Rochester, New York. "The Use of Diethermy in the treatment of Disease"—George M. Brown, Bay City, Michigan. Discussion of a case of Congenital Structure of the Ureter—Rockwell M. Kempton, Saginaw, Michigan. "The Estimation of Sugar in the Blood from a Finger Prick—A Comparison with Other Methods"—Pauline M. Tessmer, Ph. C., Ann Arbor, Michigan. "Observations on Coeliac Disease," William S. O'Donnell, Ann Arbor, Michigan. "Observations on the Effect of Infections on the Course of Nephritis in Children"—Howard B. Mettel, Ann Arbor, Michigan. "Studies on Blood Pressure"—John P. Parsons, Ann Arbor, Michigan. Report of the Activities of the Clinic during the past year. Plans for the new Hospital—D. M. Cowie, M. D., Ann Arbor, Michigan.

In his presidential address before the American Pediatric Society at its meeting June 5, 1924, Dr. D. M. Cowie, Professor of Pediatrics, University of Michigan, discussed "Juvenile Medicine and Its Problems."

The following changes and promotions have been made in the department of Surgery, University of Michigan, for the ensuing year: Carl E. Badgley, Assistant Professor of Surgery vice LeRoy C. Abbot resigned. Howard B. Baker, Instructor in Surgery vice Frank E. Curtis resigned. J. Basil Hume, F. R. C. S., Senior Demonstrator of Anatomy, St. Bartholomew's Hospital, London, Instructor in Surgery one year.

Dr. I. W. Greene, Former Chief of the Medical Out Patient Department, University Hospital, at Ann Arbor, has located at Owosso, Michigan, where he will practice Internal Medicine, and be Director of the Medical laboratories of the Owosso Memorial Hospital.

Born to Dr. and Mrs. Chas F. DuBois of Alma, a daughter, Ruth Arline, on July 16th.

The Tri-State Medical Association will hold its Annual Meeting in Milwaukee October 27 to 31st, with five full days of post graduate work.

County Society News

HILLSDALE CO.

The regular Quarterly Meeting of the Hillsdale County Medical Society was held at the Country Club, Hillsdale, beginning at about 8 p. m. with a delightful dinner at the club; the President, Dr. C. T. Bower in the chair.

After the reading of the minutes, Dr. Bower presented the speaker of the evening, Dr. Rockwell M. Kempton of Saginaw.

Dr. Kempton read a carefully prepared and most instructive paper on "Water Metabolism." The doctor dwelt on the vast importance of water in the body in all the vital processes; showing how a want of water can cause disease in a hundred different forms. Also how restoring this vital element to the system to the normal quality, favors elimination, builds up tissue and cools fever, just as it puts out fire in a burning building. A very important part of his paper dealt with the different methods of introducing water into the body where for an yreason the natural channel by the mouth cannot for any reason be used. Under the skin, into a vein, by the bowel and even by a needle into the peritoneal cavity. He gave a careful illustration of the technique of all the various modes. His address was listened to with intense interest and in the absence of both gentlemen assigned to open the discussion, a general discussion was held in which several of the members took part. Dr. Kempton gave a number of interesting case histories, in which patients at the point of death had rallied and eventually recovered under the influence of the life giving water.

Dr. Kempton was warmly thanked by all for his valuable and suggestive paper.

The draft of the new constitution for the State Medical Society to be voted on at Mt. Clemens in September, was then considered, and Dr. Bell of Reading was elected delegate to that meeting, with Dr. Oliver of Camden as alternate. It was decided to leave the delegate free to vote on this question as his best judgement should indicate after hearing all the arguments for and against the proposed new constitution.

After the regular business of the meeting was finished, the chair introduced Mr. Louis Mathias of Hillsdale, who proposed that the various members of the different boys' and girls' contestant clubs, present themselves at some time prior to the close of the contests this fall, for a competitive health examination by some of the physicians of the county, with a view of showing special honor to the most vigorous and perfect specimens of boyhood and girlhood. The object of this, of course, will be to create among our young people an ambition to be perfect physically, as well as mentally, morally and industrially.

All the physicians present were willing to assist in this work if called upon to do so. It was moved, supported and carried that, "The Chair appoint three physicians to form a committee to meet with Mr. Mathias and work out a plan for this service; the president to act as chairman of the committee."

The president appointed as members of the committee, Dr. Green, Hillsdale; Dr. Bell, Reading; Dr. Barnes, Waldron. There being no further business to come before the society it was moved and carried to adjourn. There were present at this meeting: Doctors Green, Franghouser and Bower, Hillsdale; Clobridge, Allen, Barnes and Yeagley, Waldron; Bell, Robson and Fenton, Reading; Oliver, Camden, Bechtol, Montgomery. Eleven in all, aside from the essayist Dr. Kempton.

D. W. Fenton, Secretary.

IONIA-MONTCALM CO.

The Ionia-Montcalm Medical Society met Thursday, June 19th, at Hotel Phelps, Greenville, Mich. Seventeen members were present. An excellent chicken dinner was served at 7:00 o'clock, after which the following program was presented:

Subject: "Medical Conditions in Vienna."

Speaker: Dr. Thomas A. Gordon, Grand Rapids.

Dr. Gordon gave a most interesting and in instructive talk which was well received.

Subject: "Surgical Aspect of the Prostate."

Speaker: Dr. Henry J. VanDenburg, Grand Rapids, Mich.

Dr. VanDenburg covered the Surgical Aspect of the Prostate Gland in a very thorough and practical manner spending much time on the diagnosis and the indications for surgical intervention. The discussion was entered into with much enthusiasm by several members of the society.

Dr. A. I. Laughlin, Clarkville, and Dr. J. E. Baker, Crystal, Michigan, were unanimously elected members of the society.

F. A. Johnson, M. D., Secretary.

GENESEE CO.

The Genesee County Medical Society met for noon luncheon at the Hotel Dresden, May 14, 1924. Dr. Loree, St. Joseph's Hospital, Ann Arbor, Mich., gave a very instructive talk on "Hospital Organization."

The Genesee County Medical Society met for noon luncheon at the Hotel Dresden, May 28, 1924. Dr. Edward S. Blaine, Chicago, Ill., Director of X-ray Department of the National Pathological Laboratory, formerly Roentgenologist, Cook County Hospital, Chicago, gave a very interesting talk on the subject, "Roentgenology of Bones and Joints."

The staff of the Hurley Hospital met at 8:15 p. m., June 16,1924, at the Hurley Hospital. Dr. John O. Polak, Professor of Gynecology and Obstetrics, Long Island Medical College, Brooklyn, N. Y., gave a very instructive and interesting talk on "Gynecology and its relation to Obstethics."

Geo. J. Cuny, Secretary.

HOUGHTON CO.

The Houghton County Medical Society met at its regular monthly meeting at the Copper Range Hospital, Trimountain, Michigan, Tuesday, July 8th, with 23 doctors present.

Dr. B. C. Whitmore of Trimountain had a very interesting paper on "Antitoxin in Diptheria." This paper was very fully discussed by all present. The next paper of the evening was read by Dr. K. C. Becker on "Carcinoma of the Cervix." This was a very interesting and comprehensive paper and was also fully discussed by those present.

We were very fortunate in having present Dr. A. W. Hornbogen, state delegate to the American Medical Society. Dr. Hornbogen not only took part in the discussion of the various papers but also favored us with remarks on State Medical Society news and urged the reading of the new constitution and by-laws which was printed in the last issue of the state "Journal."

Dr. West next presented a very interesting case of fracture and head injury of several months duration which made a complete recovery. He also showed X-ray plates of this case. Dr. West also gave the history of a case of Streptococcus infection which resulted fatally. The meeting then adjourned to a very fine luncheon which was served by Mrs. West and the head nurse, Miss Noel.

Dr. Fischer next announced that the latter part of this month or the first of next, arrangements would be made to have Dr. Pritchard of Battle Creek, and Dr. Sundwall of Ann Arbor, here to give demonstration of methods to be used in the Preventorium Clinic. A motion was made that the Houghton County Medical Society extend an invitation to these doctors to take part in our next regular monthly meeting.

A hearty vote of thanks was extended to Dr. and Mrs. West for their hospitality.

Very truly yours,

G. C. Stewart, Secretary.

Book Reviews

ANESTHESIA—By James Tayloe Gwathmey, M. D. price $6.50. The Macmillan Company, New York.

The second edition of this work brings a classic up-to-date, eliminating non-essentials and supplying a fund of practical knowledge drawn from the experience of the best known investigators and authorities in the subject. Especial attention is given to painless childbirth by synergistic analgesia, ethylene, local anesthesia, colonic anesthesia, each subject being covered in a thorough going manner.

THE MEDICAL CLINICS OF NORTH AMERICA (Issued serially, one number every other month.) Vol. XIII, No. 1, July, 1924. Octavo of 426 pages, 106 illustrations. Per clinic year, paper $12 net; cloth, $16 net. W. B. Saunders Company, Philadelphia and London.

Faithful in maintaining the high standard of these clinics this number adds another volume to the valued series.

GOITRE—NONSURGICAL TYPES AND TREATMENT—I. Bram. M. D., Jefferson Medical College, The Macmillan Co., New York.

A monograph based on clinical and practical experiences. It contains the well known theories and non-operative methods of treatment. The author is slightly inclined to exaggerate the value of and indications for medical therapy.

THE INTERNAL SECRETIONS: Arthur Weil, University of Halle. Translated by J. Gutman. Cloth, 285 pp. The Macmillan Company, New York.

A foreign presentation and viewpoint on Internal Secretions. It is well suited for beginners and students.

FERTILITY AND STERILITY IN HUMAN MARRIAGES—By Edward Reynolds, M. D., Boston, Mass., and Donald Macomber, M. D., Boston, Mass. Cloth, 285 pp. $5 net. W. B Saunders Company, Philadelphia and London

This subject is one upon which the public is seeking more dependable information and instruction. This text will be of material assistance in aiding the doctor to properly advise his patients. It's authors command our confidence and are to be commended for preparing this valued text.

MODERN METHODS OF TREATMENT: L. Clendening, University of Kansas. Cloth, 692 pp.; price $9.00. C. V. Mosby Company, St. Louis, Mo.

A most commendable text imparting the best thought and practices in the treatment of diseases. It covers drugs, the various forms of electro and mechano therapy, serums, vaccines, and diet. There is indicated the value of each agent in given conditions. As such then it should become the desk reference text of every physician.

1923 COLLECTED PAPERS OF THE MAYO CLINIC —Octavo of 1377 pp., 410 illustrations. Cloth, $13 net. W. B. Saunders Co., Philadelphia and London.

These collected papers represent the scientific achievements of the Mayo Clinic and impart the work of that organization. As such it is therefore a compilation of proven principles and practices. Its study and assimulation will prove to be instructive and of material assistance to every medical man. It is recommended for this purpose to the entire profession.

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Original Articles

HISTORY OF HOMEOPATHY IN THE UNIVERSITY OF MICHIGAN

C. B. KINYON, M. D.
(Formerly Professor of Obstetrics and diseases of women in the Homeopathic Medical College, U. of M.)

While gathering the material for this article we have repeatedly been overwhelmed at the abundance of the facts at our command.

For virtually three quarters of a century the question of homeopathy has been agitated continually both before the legislature and the Board of Regents. This agitation has come from both within and without. Much of it has at times assumed a political character. This makes it extremely difficult to sift the wheat from the chaff. As a matter of fact the Homeopathic Department has caused the Regents more worry and anxiety than all the rest of the University during these years. How many times have we been amazed at their patience and forbearance.

It is my unqualified opinion that the amalgamation of the two Medical Schools of the University of Michigan as put in force by order of the Regents on June thirtieth, 1922, is the most perfect system of Medical Education yet devised; as they aim to teach a knowledge of Homeopathic Materia and Therapeutics as well as all else that pertains to the care and cure of the sick. In fact all that has to do with the relief of the ills of mankind.

The Medical Department of the University of Michigan was founded in 1850 and the first course of lectures was delivered in the School Session of 1850 and 1851

The subject of homeopathy was first heard of in the Annals of the University in 1851. In that year certain citizens petitioned the legislature to abolish the Department of Medicine and Surgery unless some homeopathic professors should be added to the faculty. But the legislature took no action.

At this time the law was such that the terms of all members of the Board of Regents expired at the same time and an entirely new Board was installed. When the old Board of 1851 turned over the work to the new Board it made a full report of its stewardship. This report or memorial as it was called was quite lengthy and was under two principal heads.

IC7 ED The first was for the guidance of incoming Board.

The second was for the purpose of making some reply to the honorable committee of the House of Representatives at Lansing, who, though its chairman had pronounced the University a failure and also to furnish an answer to those citizens who had petitioned the Legislature to abolish the Medical Department unless homeopathic instruction was provided for.

After giving in full the manner in which it had administered the Medical Department the Board, through a memorial (written by the way, by Dr. Zina Pitcher) gave utterance to the following language, "Shall the accummulated experience of three thousand years be laid aside because there has arisen a sect in the world which by engrafting a medical dogma upon a spurious Theology has built up a system so-called and baptized it Homeopathy. Shall the high priests of this spiritual school be especially commissioned by the Regents of the University of Michigan to teach the grown-up men of this generation, etc."[1]

In 1855 the legislature added to Sec. 87 of the Organic Law of 1851 this provision: "There shall always be one professor of homeopathy in the Department of Medicine and Surgery of the University of Michigan." This same Organic Law of 1851 also gave to the Regents the power to enact ordinances, by-laws and regulations for the government of the University. To elect a president, to fix, increase or reduce the regular number of professors and tutors, to appoint the same and fix their salaries, etc.

The Regents took the case to the State Supreme Court. In January, 1856 this court decided that the Act of 1855 was unconstitutional and not for the best interests of the

(1) This memorial is given in full in Spearman's "A System of Public Instruction," pp. 312-368.

University. The court held that if this request were granted the legislature could add to or take from the faculty any number of teachers and thereby demoralize the whole University.

Owing to the excitement incident to the Civil War the subject of homeopathy was not again introduced until in March, 1866, when Doctors Woodruff and Drake. as a committee of the Michigan State Homeopathic Society, sent a communication to the Board of Regents, asking that a chair of Homeopathy be established in the medical Department of the University of Michigan. This was referred to the medical committee of the Borad of Regents, but that committee never made a report.

In 1867, the Board of Regents were greatly embarrassed for want of funds to carry on the work of the University and applied to the legislature for aid. The legislature granted aid by giving the University 1/20 of a mill on all the taxable property of the State, but with the proviso that there shall always be at least one professor of homeopathy in the Department of Medicine in the University. Rather than appoint a teacher of homeopathy the Regents preferred to do without the 1/20 mill tax (or $16,000 a year), but, at the same time tried to establish such teaching elsewhere in the state and in March, 1868, called upon the Auditor General to issue his warrant for $3,000 for its support. This he refused to do.

In 1869, the legislature granted a liberal appropriation to the University without the homeopathic "rider" and from then on has continued to grant them.

At the first annual meeting of the Board of Regents in 1868, President Haven made a report upon the teaching of homeopathy in the University. He entered into a long and very able argument upon the subject and in five printed pages gave cogent reasons on both sides of the subject.

This was fifty-five years ago and, notwithstanding the changes of fifty-five years, what he then said has proved to be true. His reason for going into the subject so fully was that the Board wanted and really needed the sixteen thousand dollars from the mill tax.

But the President earnestly advised against the teaching of homeopathy in the University. He insisted that if it were taught the University would be a place of discord, which experience has proved to be true.

In December of the same year, 1868, the Board of Regents passed a resolution strongly disapproving of a member of the medical faculty giving lectures against homeopathy, in his classes.

During the school year of 1868-69 a very interesting episode occurred in connection with the work of Dr. Hempel, who had been appointed by the Board to give lectures on homeopathy. One of the professors announced that the next day Dr. Hempel of Grand Rapids was to give a lecture on homeopathic medicine and suggested that the students meet him at the station. A mere hint was sufficient. He was met at the train by Professor Moses Coyt Tyler, and escorted to his carriage and they started up the hill for the University. Very soon a large concourse of medical and other students gathered about the carriage and began to pelt it with ancient eggs and other materials. This so frightened the good doctor that he asked to be taken back to the station. This was done and he returned to his home in Grand Rapids on the first train. This was the only attempt that Dr. Hempel made to lecture in the University. (One can imagine how different the outcome had Dr. Jones been in Dr. Hempel's place.)

In June, 1869, Dr. Hempel put in a claim against the University for his salary. This was referred to a committee of the Board. In August, 1869, the committee gave a lengthy report, claiming that inasmuch as he gave no lectures the Board was under no obligations to pay him a salary. The Supreme Court sustained the Board.

In January, 1872, the committee of the Medical Department of the Board was appointed to consider the status of professors holding positions in the Detroit Homeopathic College. In March, 1872, the committee gave an exhaustive report upon the subject. This report was decidedly adverse to any professor connected with the University holding a position in the Detroit Homeopathic College.

In 1872, the House passed a bill (House Bill 500) for the appointment of two professors of homeopathy in the Medical Department of the University, but the Senate tabled the bill. The Journals of the Senate and House and the reports of the Board of Regents contain numerous petitions, resolutions and memorials upon the subject of homeopathy at that time. Many and vigorous were the arguments pro and con.

In September, 1871, the Regents appointed a committee from the Board to take under conisderation the advisability of establishing a Homeopathic Medical College to be connected with the University at some point other than Ann Arbor. This subject has also been acted upon by the Board at its June, 1871 meeting. Dr. Ellis

of Detroit, argued before the Board in favor of this, i. e., that the school be located at Detroit. At this same session, June 1871, a memorial was presented to the Regents, signed by citizens of Detroit, offering land for a location and money for the erection and conduct of such a school to be connected with the University.

The Regents promptly and unanimously accepted this offer and adopted a resolution declaring that when they were authorized by law to make such a school a part of the University, with proper provision for its support they would administer its affairs to the best of their ability. This offer of the Regents to the citizens of Detroit was renewed in 1873, but as Detroit did not fulfill its promise the Regents did not establish such department in Detroit.

Early in 1875 the Board of Regents again reaffirmed their former resolutions declaring their willingness to establish and take official charge of an independent school of homeopathy whenever funds should be provided for its support.

In March, 1873, the Board of Regents appointed a committee to report on the subject of teaching homeopathy in the University of Michigan. This committee reported adversely to such teaching in the Medical Department of the University.

On March 20, the same year, 1873, the House of Representatives appointed a committee with instructions to proceed to Ann Arbor and obtain testimony on the subject. This committee at once went to Ann Arbor and took the testimony of nineteen well versed and responsible witnesses, members of the University faculty. The testimony covered one hundred and ten closely written pages of legal cap paper and is before me as I write.

The questions covered two points. First, did the witness think that homeopathy could be taught successfully in the Department of Medicine and Surgery of the University. Second would it be better for all concerned to teach it elsewhere? If so, should it be a part of the Medical Department or a separate department. I will choose but eight out of the nineteen to wit: President Angel, Judge Cooley, the eminent jurist, Rev. Geo. R. Williams, for thirty-two years professor of physics in the University, Prof. Olney, the noted mathematician, Dr. Cocker, professor of moral and mental philosophy in the University of Michigan, and one of the greatest logicians of his time, Dr. Adams, professor of history in the University of Michigan, Dr. Douglas the able chemist and last, but not least, Dr. Ford, the greatest teacher in Anatomy of this or any other age or country. These all testified that to teach homeopathy in the Medical Department would necessarily kill the medical department. Some thought it would ultimately kill the University. This last statement was based upon the fact that when the Medical Department was founded there were but sixty students in the whole University and the first year's class in the Medical Department alone was ninty and from then on the University as a whole made rapid strides. In the early 70's the Medical Department alone had as high as 525 students. When it was decided by the legislature in 1873 that they must teach homeopathy all of the medical faculty resigned and no one could be found to take their places. Not one of these eight witnesses was at all prejudiced against homeopathy and some of them employed it in their families.

They all agreed that it would be better to teach it elsewhere as a separate department.

We will now quote the witnesses:

PRESIDENT ANGELL

President Angell:

Question: What, in your opinion, would be the result if two professors of homeopathy were installed in the Medical Department of the University?

Answer: I have given that subject some consideration and made a great many inquiries to get at something that would help me to a conclusion and the best information I can get leads me to think that it would deter many students from coming here. Nearly all of those who do not want to be prepared for homeopathic practice, I think consequently, that the attendance would be very much smaller, and ultimately must either make a Homeopathic school entirely or break up the Medical Department entirely.

I say this because from the best information I can obtain in consulting with physicians of the state and in different parts of the state I think they would not be disposed to recognize diplomas of students who should graduate from here. Under those circumstances and from this fact allopathic students would not come here. I do not debate the question whether that is right or wrong, or unwise, but I am pretty firmly persuaded that this is the fact. I also think a diminution in the attendance of the medical college —a serious diminution would necessarily affect the other departments.

Every year students come to the Literary Department, for instance, who are brought here by a medical student.

I say all this without a particle of prejudice to homeopathy. I employ a homeopathic practitioner in my family.

Question: Do you know of any other medical school where medicine is taught as it is here, where they have endeavored to combine a homeopathic school with it?

Answer: I think it was tried in Europe at one time and the experiment was a failure. I think I have heard it stated so, I know of no such school now. I think it was in Europe, but I may be in error. (See Footnote.)

(2) Upon this point Prof. D'Ooge testified that during his three years' sojourn in Europe and after repeated inquiry upon that point, he found that it had been discontinued.—Author.

Question: I would like to ask you, Mr. President, what proportion of the students that come here to the medical school graduate from here?

Answer: It must be about one-fourth, I think. The attendance is about 350, and about 80 graduate.

Question: If two chairs of homeopathy were introduced in the school, would that three-fourths of students who go from here probably be received cordially in other schools?

Answer: I suppose not.

Question: If a Homeopathic Medical School, as a separate department of the University, were established in some other city, would that operate injuriously upon the University as a whole, or upon the Medical Department?

Answer: I have no reason to think it would.

Question: Would not that be the best way to dispose of the matter in this case?

Answer: I have thought so.

Question: Would there be any objection in that case to the diploma being signed by the Board of Regents if such homeopathy faculty recommend that they be issued?

Answer: I have no reason to suppose there would be.

Question: I would like to ask the President one other question. In your opinion, would it or would it not conduce to the best interests of the University if this question should be settled by establishing a homeopathic branch of the University of Michigan outside of Ann Arbor?

Answer: Yes, sir, that is my opinion.

DR. FORD, PROFESSOR OF ANATOMY

Question: How long have you been connected with the University?

Answer: Nineteen years.

Question: What, in your opinion, Prof. Ford, would be the result if two professors of homeopathy were installed in the Medical Department of the University?

Answer: I think it would prove injurious.

Question: Please state why you think so?

Answer: Because I think it would injure the Medical Department, which depends upon having the confidence of the medical profession.

Question: You may state any other reasons that occur to you why it would be injurious to the University.

Answer: I think that no school can survive if it teaches a principle that does not receive the confidence of the profession. We cannot alter public sentiment in that respect, whatever effort the faculty might make. I do not think we would be sustained by the profession for the reason they have no confidence in that system as a whole.

Question: Do you think that homeopathy could be taught in the Medical Department in harmony with what is now taught there?

Answer: There would necessarily be antagonistic views. I think the effect would be very much as though an antagonistic system of theology were introduced in a theological school. I think the good people, who are now in the habit of sustaining the school, would withdraw their patronage—would lack confidence in it.

Question: I would like to ask you, Prof. Ford, whether the regular practice and the homeopathic are not approaching each other?

Answer: I think they are. I think there are very few practicing that system who now confine themselves to small doses. I think further that very few of them claim to always give medicine on homeopathic principles. My friend, Dr. Knapp (who was a member of this legislative committee—Author), said to me the other day that he does not always do so. I know other men who have stated the same thing to me. This is why I think the two systems are approaching each other. The system is changing, dying out.

Question: What is your opinion of the effect, if any, which would be produced upon the University at large?

Answer: I think the ultimate destruction of the Medical Department would be complete. It would be a scene of contention and strife and would be destroyed in order to get rid of the troublesome subject, however earnestly the profession might work to sustain it. I fear the ultimate result would be the destruction of the University.

Question: You speak of the ultimate destruction of the whole institution. In which class of professors do you think this trouble would originate?

Answer: I do not know. I think the inevitable result of two antagonistic systems would be as I expressed it before, lack of harmony. I never saw a medical college enter upon a quarrel that was not destroyed by it. I have been in two medical colleges that were completely destroyed by a quarrel.

Question: Do you know of any school anywhere where medicine is taught, where the two pathies have been taught?

Answer: I have no knowledge of any such institution ever existing. Of course, the matter of the introduction of homeopathy is not a new one, but has been the subject of a great deal of conversation with us all. I have been here a long time. There was an occasion a few years ago when in discussing this subject with members of the literary faculty talking it over informally, the question was asked—whether men in the regular profession, men of acknowledged ability and character, could be found to fill the various professorships after the introduction of homeopathy. Two members of the faculty were quite sanguine that such men could be found. Subsequently the men corresponded upon this very subject and both of them changed their opinions. Both were convinced that such men could not be found to fill the places under such circumstances and they still are of the same opinion.

DR. DOUGLAS, PROFESSOR OF CHEMISTRY

Question: How long, Doctor, have you been connected with the University?

Answer: Twenty-nine years. Since 1844.

Question: I wish, Doctor, to ask you regarding the success of the University from its foundation up to 1851, when the Organic Law was passed by which the people elected the Regents. What was its history?

Answer: From the first organization of the University up to the time the Medical Department was started, its success was very indifferent. Its friends were not satisfied with its condition. I was very unpopular because it was not a success. The University suffered a good deal from extraordinary legislation and the uncertainty of everything. Everything was in a chaotic condition. The condition of the finances was such that the professors had to go without their salaries in consequence.

Question: Since that time what has been the history of the University?

Answer: About the time of the organization of the Medical Department was the starting point of the success of the University and it has since been uninterruptedly on the upgrade.

Question: You were professor of chemistry in the

(3) At that time there were but two years of six months repeated each year. This is why the students went to another school the second year. To prevent this the University adopted the graded course and made it three years and some colleges four years.—Author.

Literary Department previous to the establishment of the Medical Department?

Answer: Yes, sir.

Question: What was the influence on the University of the establishing of the Medical Department?

Answer: At the time of its establishment the number of students in the whole University was about sixty, I think. During its first year the Medical Department had ninety students. It surprised everybody. No one expected any such number. Its success gave an impetus to the whole University and from that time on it has been very successful.

Question: From your extensive knowledge of the affairs of the University, what, in your opinion, would be the effect of placing two professors of homeopathy in the Medical Department?

Answer: I can see no effect but damage to the entire institution. There have been reasons given here by other gentlemen and I think all who are connected with the medical profession know that no medical school can be sustained without the aid, sympathy and goodwill of the profession.

Question: If the Regents should establish a School of Homeopathy elsewhere, what would be the effect of such action on the University here?

Answer: As far as the University is concerned, I cannot see any evil that would result from it.

DR. ADAMS, PROFESSOR OF HISTORY IN THE UNIVERSITY

Question: How long have you been connected with the University?

Answer: Fifteen years, with the exception of one year, spent in Europe.

Question: Will you state, Professor, what, in your opinion, would be the result if two professors of homeopathy were installed in the Medical Department of the University?

Answer: I think it would be very injurious, if not destructive, to the Medical Department and for the following reasons:

It is understood that students coming here who intend to graduate and practice their profession do so in the expectation of being able to carry a certificate showing the work done here and being given credit for this work in any other school.

It is commonly believed, and with reason, that such certificates would not be accepted if homeopathy were taught in this University. The medical associations, both state and national, take the ground that they cannot accept diplomas from schools where homeopathy is taught. This being true, students would go to other schools for instruction.

REV. GEO. P. WILLIAMS, PROFESSOR OF PHYSICS IN THE UNIVERSITY OF MICHIGAN

Question: How long have you been connected with the University?

Answer: Thirty-two years.

Question: You teach in the Literary Department?

Answer: In all departments that require the study of physics, which includes all but the Law Department.

Question: What, in your opinion, would be the result if two chairs in homeopathy were established in the Medical Department of the University?

Answer: I think it would be very disastrous to the Department.

DR. BENJAMIN COCKER, PROFESSOR OF MORAL AND MENTAL PHILOSOPHY IN THE UNIVERSITY

Question: Dr. Cocker, in your opinion, what would be the result if two professors of homeopathy were installed in the Medical Department of the University?

Answer: My opinion is that it would be disastrous to the Medical Department of the University. My general reasons are that the Medical Department has been built up entirely through the labors of a class of men who are recognized as scientific and experienced in the practice of medicine and has been almost entirely self-supporting and is supported, so far as students are concerned, exclusively, or nearly so, from the patronage of the scientific or experimental profession. If I may be permitted to add a word more I will say that the reputation which this school attained, especially during the time of the Civil War, added greatly to the prestige of the University. Some of the best army surgeons were graduates of this institution and some of our students have made a great reputation in Europe, operating in the presence of European surgeons, and that to destroy this reputation by changing the character of the school would be to blot out the best part of the record of the University. Personally I should not object to the appointment o fthese men, and will agree to it if it can be arranged so as not to hurt the school, but I have come to the conclusion that it cannot be done.

Question: Dr. Cocker, does the practice of medicine as taught by the Homeopathic School differ so materially from that taught by the Allopathic School that they could not be blended without destruction to one or the other?

Answer: I think they could not be blended without being disastrous. I have studied medicine myself and practiced it some. There are a good many members of the faculty who employ homeopathic physicians in their families, but who would deprecate or would regret the appointment on the ground that they believe that it would ruin the Medical Department which, to all of us, has been a source of pride.

DR. EDWARD OLNEY, PROFESSOR OF MATHEMATICS IN THE UNIVERSITY OF MICHIGAN

Question: Prof. Olney, how long have you been teaching in the University?

Answer: This is my eleventh year.

Question: What, in your opinion, would be the result if two professors of homeopathy were installed in the Medical Department?

Answer: I cannot say what would be the ultimate result, but the immediate effect would be to diminish the attendance very materially. I should be surprised if there were one-third as many as we now have.

Question: You may explain why you think so.

Answer: The chief reason is that inasmuch as most of the students read in the offices of the regular practitioner, and these practitioners have an aversion to homeopathy, would not advise their students to go to such an institution. Another reason is that in all medical schools many students take one course in one institution and the other course elsewhere. Therefore students from this school would not be accepted by other schools. Hence, they would not come here at all. Then, again, the diplomas from here would not be accepted in the different societies and all of our graduates would be excluded from such privileges. If you include in your question the effect upon the institution in general (You may do so), I would answer that by saying that it would cut down our finances by at least ten thousand dollars. This is a very safe estimate, because the interest on the part of the homeopathic profession would not increase the income to any extent. Therefore the University would run behind that amount each year beyond all available resources.

Question: Please state whether the University at large would be otherwise affected in any way by the introduction of homeopathy in the Medical Department?

Answer: That question is so broad that one can hardly give a definite answer. It is true that for

several years after the Medical Department was founded, the prestige of the University was obtained from that Department. Whether the University is now so strong as not to suffer from that loss in the Medical Department is a question hard to answer. I think, however, the University would suffer very materially from the crippling of the Medical Department. The public would be influenced by the number of students in attendance and a diminution from twelve hundred to eight or nine hundred would be a serious blow to the University.

A catalogue sent out with such figures would be a palpable thing that everybody could understand and in my judgment would be very detrimental.

Question: I would like to ask you, Professor, whether it is of any advantage to the University to have a medical department connected with it.

Answer: Yes, sir. I think it is a decided advantage in the filling out of the idea of a University in the public mind. I think any prominent department which can be added does very much to strengthen the whole University. The success of any department lifts up the Literary Department and holds it up.

Professor Olney made the following written statement at the conclusion of his testimony. "From my intimate acquaintance with the men who usually consult together, both in and out of the faculty concerning the well-being of the institution, I have no doubt that a settlement of this vexed question by the establishment of a Homeopathic School somewhere else would be hailed with great satisfaction by those whom we are accustomed to look upon as friends of the University.

"I have no doubt of this at all. I know that President Haven would have so estimated it. It is not because there is a feeling against homeopathy here, but any practical settlement of the question in that way would be hailed with the highest gratification, I am sure. In fact, I know it is so."

JUDGE THOS. H. COOLEY, PROFESSOR OF LAW IN THE UNIVERSITY OF MICHIGAN

Question: Judge Cooley, you may please state to this committee what, in your opinion, would be the result if two professors of homeopathy were installed in the Medical Department of the University of Michigan.

Answer: I think it would necessarily be injudicious, sir.

Question: Please state what your reasons are for thinking so.

Answer: My reasons are substantially the same as those given by Professor Olney. That there is no department of the University so dependent upon the good will of the profession as the Medical Department is upon the medical profession. The profession controls to a very large extent the attendance of students. Not wholly so, but certainly very largely so. I think the necessary tendency would be that what is called the regular profession would cease to a very considerable extent to give it its countenance and support and I cannot see for myself whence that deficiency is to be supplied. A few homeopathic students might come, but many come now.

Question: If you have no objection, will you please state whether you employ a homeopathic physician in your family?

Answer: Well, sir, until Dr. Sager's health failed I generally employed him. Since then, when I have had occasion to call in a physician for my children I have called in Dr. Backus, a homeopathic physician. I think I could name some other professors, but do not suppose it will be necessary.

Question: Is there anything else in this connection you would like t osay, Judge?

Answer: I feel very great delicacy in saying anything except in answer to specific questions. I will add, however, that my opinion is not based upon my own observations exclusively or upon conversation with what are called regular practitioners, but upon conversations with those who practice homeopathy as well, some of whom have expressed to me the opinion that to put homeopathic professors in here could only cause mischief without benefitting homeopathy.

You have inquired whether one department could be injured without effecting the rest. I should say unhesitatingly it cannot. The standing of the University, especially with educated men upon whom we very largely depend for our reputation as well as for our students, depends in no small degree upon its completeness as a University, and the possibilities and advantages which each department more or less gives to students in the other departments. And the standing of the Medical Department is such that every year they contribute to bring students to the Literary Department. Perhaps it would not be unjust to say that the Medical Department first acquired an established reputation and was known throughout the country, while the Literary Department was still comparatively unknown. That reputation has been of high value to the Literary Department and contributed very largely, I think, to build it up.

Question: Can you suggest any change that should be made in this legislation that would benefit the University?

Answer: I hardly feel it within my province to speak on this subject at all. I have no unfriendly feeling or prejudice towards the homeopathic school, as you can see from my not hesitating to employ one in my family, and if the homeopaths were in possession and by their ability and reputation, as teachers had succeeded in building up a school correspondidng to the one now here, I should be opposed to any such action being taken on the part of others as would result in its substantial destruction. It has seemed to me that it is impossible to give aid to them by the state without injury to the school now established, except by giving it at some other point. To put these professors in here and sustain them here must necessarily, I think, result in a feeble school and no desire or effort of the present faculty could prevent that result.

Eventually if they are to be connected with a school corresponding to their reputation they would be obliged to abandon this ground. What I have said is based on the assumption that the professors now here remain and do what they can to prevent injury. (They did not remain, but all resigned when the bill of 1873 was passed.—Author).

The remainder of the nineteen witnesses agreed in substance with what has been given but some of them were teachers in the O. S. department and were therefore prejudiced and the others were so nearly identical in their testimony that it is not necessary in my opinion to take the time to quote them.

After such testimony this legislative committee reported adversely to such teaching in the Medical Department of the University but in spite of this report as well as the report from the Board of Regents to the same effect the Legislature ignored these reports and in the following month, April, 1873, passed the following: "The Board of Regents shall on or before July 15, 1873, appoint, install and thereafter maintain two

professors of homeopathy in the Department of Medicine and Surgery in the University of Michigan, to wit; one professor of theory and practice of medicine and one of Materia Medica, who shall be paid a like salary and be entitled to all the rights and privileges of the other professors in said department. All acts or parts of acts inconsistent with this law to be and are hereby repealed."

This is when all of the professors in the Old School sent in their resigantions.

The Regents did not appoint these Homeopathic professors. Another thing that leads one to the conclusion that all was fixed before the committee was appointed was the fact that the House merely allowed the committee to make a report in favor of teaching homeopathy elsewhere in the state, but the testimony of the nineteen witnesses was not even read, much less studied by the Legislature. The report and testimony did not appear in the transactions and were never published and, as far as I know, the copy now before me is the only one ever written. Two years later, after much discussion, the Legislature on April 27, 1875, enacted the following law: "The Board of Regents are hereby authorized to establish a Homeopathic Medical College as a branch or department of the University which shall be located at Ann Arbor.

The Treasurer of the State of Michigan shall on the first day of January, 1876, pay out of the general fund to the order of the Board of Regents, the sum of $6,000 and on the first day of January of each year thereafter, which money shall be used by said Regents exclusively for the benefit of said department."

On May 11, 1875, following the passage of this Act the Regents adopted a series of important resolutions as follows:

"The Homeopathic Medical College shall be established at Ann Arbor and two professors be appointed to be designated as professor of Materia Medica and Therapeutics and professor of Theory and Practice of medicine in the Homeopathic Medical College of the University of Michigan. The students entering this department to be subject to regulations then in force, or hereafter to be established for the government of the Medical Department. Said students to receive instruction in the existing Medical Department in all branches outside of the two chairs in the Homeopathic Department and shall be entitled to all the privileges accorded students of the Medical Department and all graduates from the Homeopathic Department be furnished with diplomas so designated. The time of study and graduation to be the same as in the Medical Department."

It was made the duty of the President of the University to satisfy himself that the same conditions were duly enforced in both departments.

At this time the department was placed under the charge of the committee of the Medical Department. In a few years this department had its own separate committee.

On June 29, 1875, the Board elected Dr. Samuel A. Jones of Englewood, N. J. and Dr. John C. Morgan of Philadelphia. The first in Materia Medica and Therapeutics and the latter in Theory and Practice of Medicine.

At this point I wish to say a word as to why the Homeopathic School grew so rapidly in this country from 1856 to 1900. Previous to 1845 the practice of medicine was in a deplorable and appalling state. The enormous doses of powerful drugs given caused more illness than they cured. But the ruling powers in the profession were so blinded by prejudice and bigotry that they did not try to see the truth. The terrible persecution and the ostracism of those who professed homeopathy only tended to increase their followers. Their results were so far superior to heroic dosing of the Old School that the public soon lost confidence in the regular profession and took to homeopathy. This, coupled with the unyielding, Kaiser-like attitude of the regular profession accounts for the rapid growth of homeopathy during the latter half of the 19th century. But the dominant school has virtually adopted the Law of Similars and is teaching it in its best schools. Because the work of Pasteur, Koch and all those teaching the effects of vaccines, serums, toxins, antitoxins, etc., is but a confirmation of the Homeopathic Law of cure.

The Homeopathic Department occupied the second story of the most westerly of two houses (originally built for the residences of professors). These houses were located on the north side of the campus and faced North West Avenue. The Dental Department occupied the first story. I well remember how we students reached our rooms by an outside covered stairway.

During the first year, the session of 1875-6 Doctors Jones and Morgan lectured every day and often gave a second lecture in the evening.

This year the attendance was twenty-four and the students were of mature years, much older than now, averaging twenty-six years of age and they were a hard working body of men and women. Each carried all the required work in the Old School De-

partment as well as that of Doctors Jones and Morgan, and not a single condition was given any member. In all the work taken in the Old School Department the relations between the students were always of the most pleasant character. They worked side by side in perfect harmony. This has always been true. All the trouble came from a few bigoted teachers and medical men outside of the faculty. (I wish to add from personal experience of one year the fact that Doctors Jones and Morgan were the equals of any I have ever heard lecture. Each was certainly supreme in his special subject).

At the March, 1876 meeting of the Board of Regents a communication was received by the Board from the Homeopathic class and addressed to Doctors Jones and Morgan, expressing their complete satisfaction with the teaching of those professors.

Dr. Jones was an intellectual giant and in my judgment without a peer in this or any other country or in any age as a teacher of Materia Medica. His vivid portrayal of the pathogenesis of drugs, i. e., their disease producing qualities when administered to the healthy animal or man, was so eloquent and accurate as well as profound, that his lectures made a deep and lasting impression upon the students. His knowledge of the action of remedies in disease and his marvelous skill in choosing the similimum, made him the best prescriber of whom I have any knowledge. All that I know of the administration of drugs for the cure of the sick, I owe to his teaching and guidance. His enthusiasm created such an interest in the subject that all who heard him were led to a deeper study of the art of prescribing and those who sat under his teaching were marvelously successful in treating the sick. But his unfortunate temperament and his detestation and intolerance of those who did not agree with him or who were really ignorant made it impossible for him to work in harmony with others. His tongue and pen were so caustic that he was always hurting some one's feelings and because of this the Regents were forced to drop him.

Please excuse a digression. During the deanship of Dr. Jones there occurred some very interesting incidents. Remember we were in the upstairs rooms. One morning when Dr. Jones came to his 8 o'clock lecture he found a cow standing on his lecture platform placidly chewing her cud. It did not take the young men of the class very long to slide the cow down stairs.

The following day the campus walks were strewn with leaflets containing a poem written by Dr. Jones. I recall a few words only. Dr. Halmermann's given name was Samuel and Dr. Galen's name was John and this is the beginning of the poem, "Said Sam to John, since thou art so interested in our behalf we will keep this cow, but give you the calf." There were several verses in the poem and they caused great merriment among the students, but the Old School professors did not enjoy them so much.

Another episode that occurred was of a very different character. In those days the Medical Department had a very large attendance reaching as high as 525 students. Many of these came from such great distances that they could not, or at least did not, leave the city during the holiday season. As the Regents had positively forbidden any of the Old School professors to criticize homeopathy in their classes, the Dean, Dr. A. B. Palmer, each holiday season, gave a series of lectures against homeopathy. After two or three years of lectures the Old School students, who in those days were of more mature years, sent a request to Dean Jones that he reply to Dr. Palmer. He was granted the use of old University Hall and gave a series of three lectures, entitled "The Grounds of a Homeopath's Faith." These were so well written and so eloquently delivered that they made a very profound impression upon the minds of the Old School students. They were so unanswerable that Dr. Palmer never dared to rereply and he never gave any more lectures against homeopathy. I have copies of these in my library.

Another episode: One evening several of us students of the Homeopathic Department called at the office of Dr. Woodruff in Ann Arbor. All at once we startled by a most most terrific noise outside of his office. Quick as a flash, before the rest of us realized the real cause the uproar, Dr. Woodruff siezed a basin and told us all to sit still. He started out of the door and as he did so ran his finger down his throat and at once began to vomit. The Old School students saw the point and sneaked off like whipped curs. Their very presence made him sick. Dr. Woodruff was not again disturbed.

Let us now resume the history of the College.

In June, 1876, the Executive Committee of the Board were authorized to consult with Doctors Jones and Morgan relative to the appointment of two lecturers for that department and given power to act.

In July of that year this committee appointed Dr. F. A. Rockwith of Saginaw, lecturer of Obstetrics and Therapeutics. Dr. Rockwith was a polished gentleman (French) and a scholar, and Dr. J. C. Gilchrist of Detroit, lecturer on Surgical Thera-

peutics. These appointments were confirmed by the Board on Oct. 17, 1876.

The attendance for the second year of the school, 1876-77 was fifty-one. More than double the first year's class (13 graduates). At the beginning of the third year of this school the homeopathic faculty was given one-fifth of the space in the hospital, to be used for their patients, but they were not given separate internes and nurses, therefore did but little work in the hospital. During the summer of 1877 Dr. Morgan resigned and in September, 1877, Dr. J. W. Hawkes of Chicago, was appointed in his place. After looking over the ground Dr. Hawkes resigned. He had given but a few lectures. Dr. Chas. Gatchell of Milwaukee was appointed in his place. Dr. Gatchell held his position for nearly two years. Resigning in March, 1880 and Dr. T. P. Wilson of Cincinnati was put in his place. Dr. Gilchrist lectured for two years, resigning in June, 1878. In June, 1878, Dr. E. C. Franklin, of St. Louis, Mo., was elected to the chair of Surgery and was made Dean of the Department. He held these positions for five years, resigning in 1883. Dr. Wilson was made dean in 1883. He resigned from the College on account of ill health in 1886. He was a very scholarly man and a perfect gentleman and fine lecturer. In June, 1883, the chair of Obstetrics and Diseases of Women and Children was created in the Homeopathic Department and in July, 1883, Dr. A. C. Cowperthwaite was appointed as its first professor, but did not accept the place. In August, 1884, Dr. Cowperthwaite was elected professor of Materia Medica and Pharmaeology and Clinical Medicine at a salary of $1,600 for part time. Dr. H. C. Allen was appointed lecturer on Materia Medica in September, 1880. Dr. Jones resigned in July 18, 1878. Dr. Jones was so eccentric that he could find no one to work in harmony with him. Dr. Henry S. Obetz was appointed professor of Surgery in Homeopathic in 1883, and Dr. Newton Baldwin first lecturer in Obstetrics and Diseases of Women and Children at the same meeting. In June, 1885, Dr. H. K. Arndt of Grand Rapids, was appointed professor of Materia Medica and Dr. Jas. C. Wood professor of Obstetrics and Diseases of Women and children at the same meeting. Dr. Arndt resigned in July, 1889, and Dr. Word resigned in 1893. Dr. D. F. McGuire was appointed to the chair of Diseases of Eye and Ear in 1885 and resigned in 1887. At the same meeting Dr. Sterling was elected professor of Diseases of Eye and Ear. Dr. Sterling resigned in 1889 and Dr. D. A. McLachlan was put in his place. In 1889 Dr. Chas. Gatchell was appointed professor of Theology and Practice and Dr. Chas. Mack was appointed professor of Materia Medica and Therapeutics. Dr. Gatchell resigned in 1893. Dr. M. P. Hunt was appointed professor of Obstetrics and Gynecology in 1893. Dr. E. R. Eggleston was appointed professor of Theory and Practice at the same meeting.

In 1894 culminated the long and bitter personal quarrel between Dr. Obetz (Dean) on the one hand, and the four other members of the faculty on the other. A very vigorously worded letter was written to the Board of Regents asking the Board to remove Dr. Obetz. This was signed by Doctors Mack, McLachlan, Hunt and Eggleston..

At the same meeting of the Board of Regents on October 24, 1894, a copy of the resolution passed by the American Institute in June, 1894, was presented to the Regents. In the Transactions of the Board of Regents, Vol. 91-96, on pages 368-371 will be found a very elaborate and a very fair-minded reply by the Board. This report is addressed to Dr. Pemberton Dudley, President of the American Institute.

Both the letter from the faculty and the Board of Regents and the reply of the Regents to the American Institute of Homeopathy enter fully into the details of the so-called Obetz "scheme," and both showed a logical grasp of the situation.

The one from the faculty is so obviously personal as to be robbed of any great value but the one from the Board of Regents to the Institute is a candid, fair-minded, and logical statement of the whole situation. Dr. Obetz refused to resign at the behest of the four members of the faculty above named, but after he had been sustained by the Board of Regents he voluntarily resigned in November, 1894.

At the same meeting the Board called for the registration of all the members of the homeopathic faculty to take effect in October, 1895. These resignations were duly forthcoming and were accepted at the Board meeting in January, 1895. This ended the terribly unfortunate trouble. Unfortunate from every standpoint. It injured the University and the Homeopathic College and the cause of Homeopathy.

The chief cause of the troubles during the administrations of Deans Jones, Franklin, Wilson and Obetz came from within the faculty. These quarrels were of such a personal character and were prompted by such vindictive and selfish motives that they are better forgotten than kept alive by repetition.

These internal quarrels cut the attendance to almost nil; there being only one graduate in June, 1895, viz: Dr. Atterbury of Litchfield, Michigan. This cut surely was not due to incompetence of the Deans or members of the faculty. Each of the Deans was a man abundantly able to fulfill the duties of the office. The first and last of the five (Doctors Jones and Hinsdale), especially being men of fine education and great executive ability.

As already stated, during the last year or two of Dr. Obetz Deanship his colleagues on the faculty tried to undermine him and put one of their number in his place.

In self-defense Dr. Obetz offered a solution of the trouble by presenting a scheme for amalgamating the two medical departments. This matter was referred to and considered by the American Institute of Homeopathy at its meeting in Denver in June, 1894.

The Institute appointed a committee of which the writer was a member, to whom was referred all the evidence in the case. This committee reported against the amalgamation and the Institute adopted their report. The letters of the Regents and the four members of the faculty opposed to Dr. Obetz have already been mentioned.

Briefly outlined the Obetz plan was this:

During the session of 1893-94 Dr. Obetz proposed a tentative plan to amalgamate the medical schools. The following is the wording of the resolution adopted by the Board of Regents: That one school of medicine be established in which both faculties were to be retained. Each student was to register as a student of medicine and surgery, receive instruction from both faculties and graduate as a doctor of medicine from the University of Michigan.

This plan to be adopted only in the event of its concurrent acceptance by both faculties.

This plan was objected to by all the other members of the Homeopathic faculty and by a majority of the profession in the state. This matter led to such bitter contention that by the advice of the Board, Dr. Obetz offered his resignation; he having first been vindicated by the Board against the charges of the other members of the faculty in November, 1894. The Board at the same time called for the resignation of all the other professors on the faculty to take effect Oct. 1, 1895.

After this long continued turmoil and annoyance the Board came to the conclusion that the only solution lay in a complete reorganization of the college.

All the resignations were duly accepted and a complete reorganization was effected.

It was the professional opposition to the school as conducted together with personal and local causes that stimulated the Legislature to enact the Law of 1895, which in effect directed the Regents to remove the college to Detroit. How completely the Board had revised its policies of 1878 is shown by the vigor with which it resisted removal.

The Supreme Court decided the law to be constitutional but the Regents did not obey the law. Those in favor of removal then asked for a mandamus to compel the Board to obey the law. Upon this point the court ruled that inasmuch as the Board had full control of all matters appertaining to the government of the University, they might obey the law or not as they chose. In view of its great importance not only to the Homeopathic Medical School but to the University for the future I deem it wise to give in full the masterly historical document reported by the combined committee of the Law and Homeopathic Departments of the Board of Regents meeting of January, 1897, giving the reasons why the Board decided not to obey the mandate of the Legislature regarding the removal of the Department of Detroit.

DECEMBER MEETING, 1896

Regent Cook presented and read a communication from Dr. D. A. MacLachlan and others in relation to the removal of the Homeopathic Medical College to Detroit. On motion the matter was referred to the Law Committee, and the Homeopathic Committee for consideration.

JANUARY MEETING, 1897

On motion of Regent Butterfield, the Board went into executive session.

Regent Butterfield, chairman of the special committee appointed at the last meeting, to whom was referred for consideration the communication of Dr. D. A. MacLachlan and others in relation to the removal of the Homeopathic Medical College to Detroit, submitted the following report:

REPORT

At a meeting of the Board of Regents, held December 16, 1896, there was presented to it the following petition:

"To the Honorable Board of Regents of the University of Michigan:

Whereas, the Supreme Court has established the validity of the Act to remove the Homeopathic Medical College to the City of Detroit (Senate Bill No. 455 of the Public Acts of the State of Michigan, 1895), and whereas, the profession is favorable to the said removal as therein provided and is practically unanimous in this desire as shown by the accompanying resolutions addressed to the President of the State Society, and signed by the leading Homeopathic physicians of the State:

Therefore, we, the Board of Control of the Homeopathic Medical Society of the State of Michigan, do hereby urgently request your Honorable

Board to take such action at your next meeting, as in your wisdom seems best, and report the same to us at an early date."

Attached to the above were several documents similar in character, signed by seventy persons and addressed to the President of that Association, a former member of the faculty of the Homeopathic College. In these documents the subscribers urged the Board of Regents to remove the college and pledged themselves to use their personal influence to accomplish the result.

The method by which this personal influence is to be utilized is apparent from a circular circulated through the mail, and which is as follows:

"Dear Doctor—Four years ago an attempt was made to 'amalgamate' the Allopathic and Homeopathic departments of the University, that resulted in very nearly wrecking our College, and two years ago a bill was introduced at Lansing to abolish the College. Thereafter, at the request of the Homeopathic profession, the legislature enacted, 'That the Board of Regents of the University of Michigan are hereby authorized and directed To ESTABLISH A HOMEOPATHIC MEDICAL COLLEGE as a branch or department of said University, which shall be LOCATED IN THE CITY OF DETROIT.' It also directed the Regents to discontinue the chairs at Ann Arbor, and transfer them to Detroit, appropriating $25,000 for building and equipment, the profession agreeing to provide a site, and the trustees offering the use of Grace Hospital.

"In due time the bill was declared constitutional, the site was tendered the Regents, and they were urged to comply with the law. They refused. Homeopaths asked for a mandamus to compel them, and the Supreme Court ruled that the Regents might obey the law or not, as they chose. The College is still in Ann Arbor, with a reported total of 42 students.

"The Legislature convenes January 1st, and Homeopaths must be up and doing, if they finally secure what they undertook two years ago, viz: to rectify the fatal error made 20 years ago in locating the College at Ann Arbor. While they are about it they should go further and place it beyond the power of the Regents to hamper or suppress the College. As is well known, a 'rider' upon the University appropriation bill is the only and a certain means to enforce compliance with the law, and to secure the wish of the Legislature and the profession. Two years ago the legislators said: 'Whatever Homeopaths agree upon, they shall have,' and they were true to their word. The profession were a practical unit in asking for the removal bill and the Legislature equally a unit in granting it. The situation is the same now. If every Homeopathic physician will give prompt and affirmative answers to the questions on the enclosed postal card, the work of seeing that the removal bill is complied with is as good as done.

"The members of the profession in eight of the chief cities of Michigan have already pledged themselves to this end, only one having declined the request to sign. Taking this as an indication of the sentiment throughout the State, a unanimity greater even than two years ago seems likely to prevail. The request is again made to each and all members of the State profession, and it is hoped that not one will fail to respond cordially and at once. If so, a new era will dawn upon Homeopathy in Michigan.

Fraternally and truly yours,
D. A. MacLachlan,
President State Society.

"P. S.—It is thought best to have a joint committee, comprising the Board of Control of the State Society, and one for the whole profession. * * * If names suggested on the enclosed postal don't suit, erase and insert the names you wish."

The committee appointed by the Regents to consider the question involved in the above documents would respectfully report as follows:

From the best information at hand, we believe there are in the State of Michigan about five hundred Homeopathic physicians. Under the circumstances your committee can scarcely be expected to accept a petition signed by seventy persons as evidence of the unanimity of the entire profession of the State. But whether the petition represents a majority or a minority, it demands and is entitled to receive a fair and frank answer, and, in discussing the question, we shall consider not only the statements in the petition, but those in the circular accompanying the same.

1. The first statement in the circular is that four years ago an attempt was made to "amalgamate" the Allopathic and Homeopathic departments of the University, and that it resulted in nearly wrecking the Homeopathic College. The facts are as follows:

About the time mentioned the then Dean of the Homeopathic Department suggested to the Board a plan by which there should be one Medical School in the University to be known as the Medical School of the University of Michigan. That in that school both schools should be represented by professors as to the chairs where the teachings were diverse. That all students should be permitted or obliged to hear both sides, be graduated as students of the Medical College of the University of Michigan and be left perfectly free to adopt after their graduation the practice of either school as they preferred.

After consideration the Board decided that so radical a change should not be made without action of the Legislature, as the Homeopathic school was dependent upon special legislation, and thus, so far as the Board was concerned, the matter ended, and the gentleman who made the suggestion has since ceased to be a member of the faculty, not, however, for that reason. In the opinion of your committee, the personal rivalries and discussions which divided the Homeopathic Faculty at that time, and which paralyzed its efficiency, had a great deal more to do with the falling off in the attendance of the Homeopathic College than the discussion of this resolution.

2. A second statement is that two years ago a bill was introduced at Lansing to abolish the Homeopathic College. Your committee have no present means of verifying this statement, but they are certain that no such action was ever taken or approved by this Board. Nor had the Board any information on the subject, nor is it in any way responsible for it.

3. The statement is made that the Board refused to comply with the law. At the last session of the Legislature of this State an Act, No 257, Public Acts 1895, was passed, directing this Board to remove the Homeopathic College to Detroit on condition that prior to such removal a suitable site for the location of the buildings of such department should be donated to the State in fee simple, and on the further condition that an arrangement be made with Grace Hospital for the use of the same on such terms as to the Regents shall seem appropriate, without expense to the State. As the Board was advised by its counsel, and as was apparent from the Act itself, it was not only the duty of the Board, but it had no right, to take a single

step until the conditions were complied with, and it would not do this without being in danger of a claim being made that the conditions had been waived. That these conditions were exceedingly important is apparent, and that by the force of the Act itself the duty was laid upon the Board of not removing the department until they were complied with is also apparent, and yet these conditions have not been complied with, nor has either of them. No site has been procured or offered to the Board of Regents, nor have the Board had any assurance that any fund exists anywhere with which such site could be purchased. No arrangement has been made or suggested, or offered to be made, whereby the use of Grace Hospital, free, for a Homeopathic College could be secured. It has been well known that for many years Grace Hospital has run behind in its expenses, and in order that the Board might be safe, and the people of the State might be safe, in incurring the expense incident to the removal of the Homeopathic Medical School to Detroit, some guaranty should be given that the hospital would be sustained in the future without expense to the people of the State. Not only has this not been done, but, so far as your committee are advised, no action whatever has been taken to secure that end. Suggestions and applications have been indeed made to this Board, but they have been in the nature of requests to do something, or permit something to be done, different from what is required by the conditions of the Act, and the doing of which might have placed the Board in the position of assuming the burdens without receiving the benefits contemplated by the Act.

To have removed the College without the fulfilment of these conditions would have been to disobey a law of the Legislature of this State and to betray a trust imposed by that body upon this Board. From the passage of that law to the present time, there has not been a moment when the Board could have complied with the wishes of the gentlemen who signed that petition without betraying that trust and violating that law, and the petition in question is in substance a request that the Board do both. Shortly before the case referred to in the circular was brought, an application was made to the Board for the making of some arrangement so that at the least expense the question involved in the Act could be passed upon by the Supreme Court of this State and settled. It was admitted that the Act had not been complied with, but it was claimed that it was a hardship upon the friends of the movement that they should be required to go to the expense of procuring a site and to the trouble of making the arrangement with Grace Hospital until that question should be decided. And they asked that as a matter of courtesy the Board would give to them an opportunity to test the law. The Board were advised that if they should pass a resolution refusing to consider any offer made by the friends of the movement, a technical ground would be laid for an application to the Supreme Court. The only offer made was a statement by the attorney of those favoring the movement that they had secured an option on a lot in Detroit. It was scarcely claimed that this was in compliance with the law, and yet for the purpose of enabling the question to be raised and as an act of courtesy to them, the Board passed the resolution indicated. This is the only attempt at the tender of the site made to this Board, and since the decision of the Supreme Court no communication whatever has been received by the Board upon the subject from those favoring the movement, except the petition in question.

It is true there are now 42 members of the Homeopathic School. It is also true that the average attendance during the past five years, prior to the present college year, in that school has been only 41; and that a little over one year ago the present Faculty took the school, without practically any attendance, and by their industry, and their ability, and by united action they have already brought it to its present condition in the face of the opposition of a number of Homeopathic practitioners in this State, who seem not so anxious that the principles of medicine which they claim are the true ones, should be taught as that they should be taught in a certain place.

The circular, however, outlines a scheme of action by which the Board of Regents of this University are to be deprived of the discretionary powers which the people of this State have vested in them by the organic law of the State—by presenting to them the hard alternative of the abandonment of those rights, or the starvation of the University. It becomes, therefore, not only proper that unjustifiable attacks upon the past action of the Board should be repelled, but that the question should be frankly and fully considered as to what should be done for the future. In order to fully understand this question it is necessary to consider the position of the Homeopathic Medical College in the University at the present time. It has always been admitted that except as to a very limited number of subjects the teachings of the students of the Homeopathic College and of the College of Medicine and Surgery are the same. All the Homeopathic profession has ever asked until lately is that instruction in those few subjects should be separate. For the fiirst two years of the medical course in the University, the students of both colleges take the same course, listen to the same lectures, and work in the same laboratories. In this way a very large amount of expense has been annually saved to the State. Apparatus, laboratories, libraries, and museums have been used in common, which in case of a removal to Detroit it will be necessary to duplicate. This has for many years met with general approval. Lately, however, there has been a constant cry from a part of the Homeopathic profession in this State for the institution of a Homeopathic College with a full four years' course, separate in equipment and in all the teaching chairs. The Board has hitherto not yielded to this demand, first, because in their judgment there was no reason why the State should be put to the greater expense necessary to the change, because it did not believe that the efficiency of the College would thereby be increased, and second, because it was impossible for financial reasons, to accede to it. Medical education under the most careful, conservative management, is always very expensive, changes are continually being made in expensive apparatus, and in the construction and equipment of hospitals; and the working force of the college itself is more difficult to supply and at a greater expense than in almost any other branch. It is felt that it is an education that deals with life and death and that nothing which really tends to its efficiency can be regarded as unnecessary. With the limited means at its command the Board has never been able to meet many of the demands of the medical faculties which it felt were reasonable. It is now proposed in addition to what has hitherto been demanded to remove this whole school to Detroit, and, for practically building up a new medical college, an allowance has been made of $25,000. In the judgment of your committee $25,000 is not enough for a building for from 50 to 100 students if the lecture

rooms, laboratories, and offices are all to be included in it. In our opinion such a building would cost at least twice that amount after the site was given to us. The cost of equipping the laboratories after the buildings are provided would probably be from $4,000 to $5,000 apiece. The following laboratories will be needed: 1. Chemical. 2. Electro-therapeutical. 3. Biological. 4. Histological. 5. Physiological. 6. Anatomical. 7. Pathological, including Hygenic and Bateriological. It is claimed that men can be found in so large a city as Detroit who will act as professors in such a school free of charge and that the expense would not thereby be increased. There are many branches, such as chemistry, biology, etc., in which the instructors must give their whole time to the work and cannot be medical practitioners at all. These must all be paid wherever the college is. In the presen tstate of medical education specialists are demanded for the several chairs, and these are to be procured only by selection from a wide field. We do not believe that men of that class will be found who are willing for any length of time to fill the chairs, without a salary. The expense of this Board has bee nthat while volunteers might be secured for advertising purposes to take appointments temporarily, their continuance was only secured by the payment of the usual salary.

It is to be considered that in the removal of the Homeopathic School to Detroit, the Regents are expected to embark on a serious enterprise and one which might have to the University at large very serious consequences. By the Act known as the one-sixth mill bill from which the University derives its revenues from the State, it is provided that the several departments shall be maintained as they then existed. If therefore, this department should be once removed to Detroit, those interested in that special school might and probably would insist that the same facilities for education by way of teachers, libraries, and laboratories as are now afforded at Ann Arbor to their school should be furnished at Detroit. And to accomplish this either the State must each year add more than $25,000 to the income of the University in addition to the large expense of the instalment of the college, or else the other departments of the University must be weakened and the efficiency of the University as a whole sacrificed to this one school. If the people of the State desire a separate school of Homeopathy at Detroit, they should at least understand in advance the magnitude of the tasks they are undertaking and they should not ask this Board to accomplish impossibilities. In view of the wide differences of opinion which exists between the promoters of this enterprise and this Board as to that expense, we would suggest that in case such school be established, it be established under a separate board so that no claim can be made that the school is not treated fairly in comparison with other branches of the University, and the state may be able to ascertain the actual cost of such an insituation. It will then appear whether this Board is correct or not. So far as the Homeopathic College itself is concerned, we believe that, like every other department of the University, it is stronger and more prosperous because it is a part of the University, not simply in name, but in fact, and that students and teachers are drawn to it, and retained in it, because of the University life in which they may thereby participate. There are numerous and important incidental advantages arising from the presence of other departments of the University, which would be almost wholly lacking in the new school. There are many scientific lectures given here during the year which are helpful to the students which would not be given there, and the stimulus and helpfulness of life in the atmosphere of the University would be missing. There would be simply the narrow, special, and technical work by the school itself to furnish training for the students.

Your committee has thus far considered mainly the mere question of dollars and cents. Behind all these and above all these is the more important question of its effect upon the University. Long ago the people of this State abandoned the idea of a University with separate branches in its different cities, and adopted the policy of centering all its departments in its present location. There, as we have already said, where each department has added to the development and growth of all the rest, it has grown to its present position of eminence among the universities of the world. If it is proper, to satisfy a few of the members of one of the great professions, to remove one of its departments to Detroit, it is, on the request of other citizens of the State, proper to remove other departments to other cities, and, once commenced, there is no visable opportunity for pausing in the process of disintegration. It would be the beginning of the end. In the opinion of your committee, to grant the prayer of the petitioners would be not only a most flagrant breach of the duty laid upon us by the Legislature of the State, not only impossible with any funds within the control of this Board, and not only unadvisable for the real interest of the school itself, but dangerous as the first step in a policy which, once entered upon, could not easily be abandoned, and which would ultimately lead to the destruction of the University.

In view of these considerations, as well as many others that might be urged, your committee recommend that the prayer of the petition be denied.

ROGER W. BUTTERFIELD,
LEVI L. BARBOUR,
P. N. COOK,
FRANK W. FLETCHER,
HENRY S. DEAN.

On motion of Regent Dean, the report was adopted, and 1,000 copies were ordered printed for distribution by the following vote:

Ayes—Regents Barbour, Cocker, Cook, Dean, Kiefer, Fletcher, and Butterfield.

Nays—None.

For the first year of the reorganization 1895-96, there were four members of the faculty, Dr. W. B. Hinsdale of Cleveland, Ohio. Dean and Professor of Theory and Practice and clinical medicine; Dr. Royal Copeland of Bay City, Mich., Professor of Opthalmology and Otology and Science of the faculty. He was also given the chair of Pedalogy but never gave any lectures on the subject. Dr. Oscar LeSuer of Detroit as professor of Surgery and Dr. Parmalee of Toledo, Ohio, as acting professor of Obstetrics and genecology. Dr. W. A. Dewey was made professor of Materia Medica in June, 1896. In the fall of 1897 Dr. C. B. Kinyon of Rock Island, Ill., was made professor of Obstetrics and Diseases of women in place of Dr. Parmalee. This filled the five chairs and while other teachers have since been added, they all come under these five heads.

Upon the resignation of Dr. LeSuer (in 1901), Dr. Dean T. Smith of Jackson, Mich. was elected to the chair of Surgery.

No body of men ever worked harder or more harmoniously than did the Hoemopathic faculty from 1895 to date.

Each member bent his whole energy in helping to build up the school. During my term of twenty-one years I deliberately tried to persuade several of my private patients to go to the Homeopathic Hospital in order to give the class the clinical material, and thereby attract students. During the years 1898 to 1918 I sent to the hospital on an average each year over fifty well-to-do patients, thereby losing some three to five thousand dollars a year for the sake of the school. The Dean was always repeating, "You cannot have a Medical College without students," and he and all the rest of the faculty acted upon that theory.

But all to no purpose for the inevitable tendency of the times is to have but one School of medicine wherein all the facts of Medical Science are taught and the best colleges now acknowledge this fact and in a short time all will follow the lead of the University of Michigan and cover the whole field of Medical Science.

In all the entire session of the legislative session of 1922 and 1923 the above mentioned Homeopathic Doctors were very active at Lansing and throughout the State and Nation also, and brought all the influence they could command upon both the Senate and the House, and used every means known to politicians to defeat the action of the Board of Regents. All to no purpose as the Legislature took no action except to defeat every move made by the Homeopaths.

This is as it should be for why should the tax burdened people be called upon to support a separate Medical School when the inevitable tendency, on all sides, is to have but one class of Medical Colleges and these to teach all the facts known to Science for the cure of sickness and the relief of mankind.

As to the ultimate success of the Amalgamated School at the University of Michigan one cannot form any definite idea or express any opinion, for there are but two men that teach Homeopathy. One teaching Theory and Practice and the other Materia Medica.

These are both young men with their reputation to make and as yet are only assistant professors.

This Commencement ('23) there were eighteen graduates from the Medical School that asked for a certificate in Homeopathic Medicine in addition to the regular medical diploma. All graduates are given the same form of diploma and any one asking for the Homeopathic certificate is given one. (Of course, provided he has taken the lectures in that branch of medicine in addition to the regular medical work.) As a matter of fact, these eighteen certificates are no criterion to go by in forming any opinion as to the faith of the applicant in the effeciency of the Homeopathic Law of cure.

At least some of these merely ask for it so that they may be able to say to those of their patrons who want Homeopathic medicine that they are prepared to give it as they are a graduate in homeopathic medicine.

Allow me to make one observation. Only time can tell how this will succees. And only competent teachers can enable any one to settle the real value of the amalgamated school.

My personal opinion is that if a student wants to practice pure Homeopathy he had better take the full course at the Hahnemann Medical College at Philadelphia.

This is a class "A" College and a good one too, in every particular, and is the equal of any Medical School in the United States.

PITUITRIN AS A REMEDY FOR RENAL GLYCOSURIA*

ROBERT C. MOEHLIG, M. D.,
and
EUGENE A. OSIUS, M. D.

That the pituitary gland exerts an influence on carbohydrate metabolism has been known for some time. It is generally believed that in hyperfunctionating states of the pituitary a lessened tolerance for carbohydrates exists, whereas in hypofunctionating states a heightened tolerance is present. The injection of pituitrin produces a slight temporary rise of blood sugar and it has recently been shown that pituitrin modifies the action of insulin. One of us (R. C. M.,) has advanced the idea that the secretion of the posterior pituitary gland has a selective action on mesenchymal tissues. From this, among other tissues, are derived the fat cells, the collecting kidney tubules and the capsule of Bowman. If the posterior lobe secretion has a selective action on the fat cells, as seems to be the case clinically, then the close relationship it would have to carbohydrate metabolism is a logical sequence of thought. Be that as it may, the beneficial effect of pituitrin in diabetes insipidus is well established. The recent data seems to point to a specific effect on the renal cells in overcoming the enormous urinary output. From the above

*From the Department of Internal Medicine.—Harper Hospital, Detroit, Mich.

ideas that pituitrin is concerned with carbohydrate metabolism and is stimulating to the renal cells, it was deemed advisable to try the effect of injections of pituitrin in a case of renal glycosuria. The patient, a physician, gave good co-operation and following is a case report.

CASE REPORT

The patient is a young physician of 29 years, who first complained of slight polyuria in February, 1923, following a party at which he had eaten quite extensively. The chief complaint was associated the following morning with some vomiting, slight nausea and general gastro-intestinal disturbances, but without any severe pain which could be construed in any sense as an acute surgical condition of the abdomen. He tested his urine for sugar and found that it precipitated Benedict's solution very markedly and although a quantitative test was not done, he estimated that there was over 2 per cent of sugar in the urine. This lasted for two to three days, was never present except in the evening following the large meal of the day. This was unassociated with increased thirst, increased appetite or nocturia. He was not easily fatigued and had no abnormal condition present which might lead one to suspect diabetes mellitus. The following morning fasting blood sugar was .085 per cent, the urine was free of sugar. For the next seven to ten days the urine was repeatedly negative on single specimens which were collected in the morning, afternoon and again at night. Urine collecting during sleep was not tested. His weight at this time was 178 pounds. He continued thus for a year, having absolutely no symptoms such as polyuria, polyphagia or polydipsia and was not easily fatigued. He was to all intents and purposes a normal, healthy adult individual, able to do his work with his usual ease.

In January, 1924, having no complaints whatsoever, he accidentally tested his urine and noted that it gave a reddish precipitate with Benedict's solution. This was a specimen taken after the evening meal. For several days thereafter there was sugar present in the urine following the evening meal, but at no other time. This was estimated as being over 2 per cent in amount. The following morning his fasting blood sugar was .095 per cent. Thereupon a sugar tolerance test was done. Fasting specimen showed .089 per cent sugar present in the blood. He was given 100 gm. of glucose. One-half hour after blood sugar was .16 per cent, 1 hour, .103 per cent, 2 hours, .099 per cent, 3 hours, .097 per cent. During this test a considerable amount of sugar appeared in the urine. At no time has there been any albumin, diacetic acid or acetone nor abnormal constituents of the urine found. Following this he adhered to a diet and it was noted that as long as he remained on a diet which contained approximately less than 100 gm. of carbohydrate for the 24 hours his urine remained sugar free. Potatoes, rice, corn, sugar, syrup and fruits caused a rapid production of sugar in the urine. Rye bread, toast, pumpkin pie and custard pie seemed to affect this not at all. His diet now consisted of the following:

Breakfast—Average portion of rolled oats with butter but no sugar or cream. Coffee with cream and half slice of toast.

Lunch—One serving of cabbage, moderate amount of meat or eggs, serving of tomatoes or spinach, probably peas, some rye bread, a glass of milk and occasionally some jello.

Supper—Steak, one half slice of bread, salad, coffee, one half banana, but no potatoes.

Total: Carbo., 78; P., 60; F., 54.

If he ate potatoes or occasionally too much bread there was a faint trace of sugar in the urine. He remained upon this diet, staying sugar free, but in three and a half months lost fifteen pounds in weight and became easily fatigued. There was no polyuria, polyphagia or polydipsia, no craving for sugar or candy and, in fact, developed a dislike for the same.

Family history: Entirely negative for diabetes or any of the familial diseases.

Past History: Mumps at the age of 24, measles at 18, chicken-pox at 12, whooping-cough at 8—without complications. Influenza in 1921, when he was sick for eight weeks. This was not associated with pneumonia. Sinusitis of the antra every winter for the last two or three years, lasting two to three weeks, occasionally associated with generalized malaise and discomfort. At intervals there has been non-surgical drainage of these sinuses. Pneumonia in 1910. Patient has occasional attacks of mild arthritis involving wrists and fingers with no signs or symptoms except localized pain upon motion. These are easily relieved by salicylates. Frequent attacks of tonsilitis during 1916 and 1917. Tonsillectomy, 1918, without any recurrences since. Herniotomies, 1917 and 1922. The latter was accompanied by hemorrhoidectomy. Bilateral otitis media in the winter of 1918, when he was in bed for two weeks. There was impairment of hearing for one year, which has returned to normal at the present time. Otitis media several times every winter for two or three years at the age of 10.

Cardio-respiratory, gastro-intestinal and genito-urinary systems are entirely negative. There have never been any gastro-intestinal disturbances which might be construed as a mild pancreatitis. Regular bowel movements.

PHYSICAL EXAMINATION

Patient is a well developed, well nourished, male adult of the long, slender diathesis, with long slender hands and fingers, tending to be of the unemotional type with somewhat heightened pitch of voice.

Skin: Large, hairy nevus 6 by 3 cm. in the region of the 12th thoracic vertebrae. Two incisional scars in the inguinal regions.

Head: Eyes normal, pupils equal, regular and react to light and distance. Fundus examination reveals a normal fundus.

Nose: Essentially normal.

Throat: Tonsils absent. Teeth in good condition with a few gold and amalgam fillings. Tongue is essentially normal. No other abnormalities noted anywhere in the oral cavity or posterior pharynx. There is no lymph adenopathy. Thyroid gland is palpable, soft, about half again the normal size, not fixed, not nodular. This is probably slightly larger than the normal for an adult male in Michigan. No exophthalmos, no tremor upon extension of the hands.

Chest: Pectoral tissues show slight increase of fat deposit. Musculature fair.

Lungs: Good resonance throughout. In the region of the hilus there is an occasional squeak or groan such as is found in chronic bronchitis and beginning asthmatic conditions. Otherwise breath sounds are clear and normal without any rales heard. No change in whispered or spoken voice.

Abdomen: Entirely negative.

Genitalia: Right testis is somewhat small and soft, this condition being present ever since herniotomy on the right, following which for a year there was infrequent pain in the right testis. It is believed that the ligature at that time, together with the manipulations at the operation, impaired the blood supply to this region. Other testis normal. No hernial impulses felt at present.

Extremities and Reflexes: Entirely normal except for a slight contracture of the third finger on the left hand due to a scar from an old burn.

Neurological Examination: Not done.

Blood Pressure—130/90.

(Note:—Only the chief positive findings have been recorded in the physical examination.)

On May 22, 1924, he was given one half c.c. of surgical pituitrin subcutaneously. He noted some weakness, shakiness, pallor of the skin and moderate moisture and perspiration of the same. There was no dizziness or ocular disturbance, but for two or three hours patient had a slight headache. He has since been having daily injections of 1 c.c. of surgical pituitrin. Following this his diet was as follows:

Breakfast—Two fried eggs; potatoes, 2 to 3 tablespoonfuls; slice of toast, coffee with cream, but no sugar.

Lunch—An omelette, small amount of potatoes—2 tablespoonfuls, cream, pumpkin or cocoanut pie, glass of milk.

Supper—Soup with crackers, a small steak, 2 tablespoonfuls of potatoes, 2 slices of bread, butter, a salad, some sliced bananas, coffee.

C. 121, P., 65, F., 75.

During this time patient attended a banquet at which he ate liberally of cake and ice cream as well as protein and other carbohydrates. His urine has been entirely free of sugar with one exception. On the first of June he received 1 c.c. of surgical putrituin at 10 o'clock in the morning. At 2 p. m., he ate a piece of cherry pie and urine at 4 p. m. "was loaded with sugar." Ate supper that evening and at 9:30 urine was entirely free of sugar. On June 10th, after having 1 c.c. of surgical pituitrin, he ate some cherry pie and showed a faint trace of sugar.

Within the three weeks the patient has been under treatment he has gained eight pounds in weight, feels immeasurably stronger and has been certainly on a more liberal diet.

For the last week patient has complained of considerable wheezing, especially in the morning, and raises a little sputum, but has had no other untoward symptoms.

On two occasions patient was given obstetrical pituitrin instead of surgical pituitrin, the former being one-sixth as strong as the latter, but there was no appearance of sugar following this. We are unable to explain appearance of sugar in urine following ingestion of cherry pie except that sugar content of pie was extremely high. The carbohydrate content of the diets have been estimated and are only approximate. We realize full well that the diet may have varied from day to day and the content of carbohydrate in the diet may have changed, but we do not believe to any appreciable degree.

Another case which responded in a like manner after one dose of pituitrin is being observed.

In reporting this case, we naturally cannot draw any conclusions. How long he must continue these injections and whether the beneficial results are lasting can be told, of course, only through a longer course of study. But the beneficial influence the injections of pituitrin have had on this case would seem to make it worthy of trial in other cases. We hope to report further studies on this and other cases of renal glycosuria. It is also to be hoped that others will report their results.

PARALYSIS FOLLOWING DIPHTHERIA—REPORT OF A CASE*

JOHN L. GARVEY, M. D.
ANN ARBOR, MICHIGAN.

Paralysis following diphtheria, while one of the most common types of paralysis, may be of an extremely mild or equally severe type. Landouzy[1] goes so far as to say that the number of cases exceeds all other forms of paralysis combined. He thinks also that 10 to 20 per cent of diphtheria patients have some form of paralysis following diphtheria. No doubt the percentage would be higher than is ordinarily thought if all cases of diphtheria were completely examined for generalized and local paralysis. Mixsell and Giddings[2] had ninety-nine cases of post-diphtheria paralysis in 4,259 cases of diphtheria. The cases of post-diphtheria paralysis entering the neurological clinic in the past three years number thirteen, all more or less late in the course of the disease and of the more severe types occurring in adults. None of the cases were seen during the clinical course of the diphtheria.

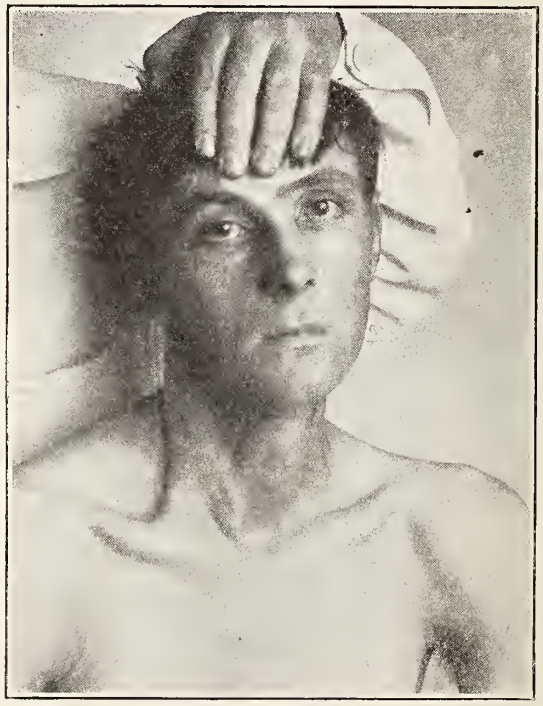

FIGURE 1.
Paralysis of the left sternocleidomastoid muscle with the unparalyzed right side tending to rotate and incline the head.

It is not my intention to report or discuss all of these cases, but to call attention to some of the more unusual observations in this group. The following case (on account of the extent of the paralysis and the involvement of such unusual parts) warrants recording in some detail.

*From the Clinic for Neurology, University of Michigan School.

CASE REPORT

A man, age 26, and a laborer by occupation, entered the University Hospital December 9, 1923, complaining of paralysis of the legs, arms, shoulders and neck, also difficulty in talking. The family and previous medical history was practically negative except one child had epileptiform attacks. His present illness apparently began October 15, 1923, at which time he had sore throat and a swelling of the left side of the face. This was diagnosed diphtheria and on October 17, two days later, he was given 10,000 units of antitoxin and on the three succeeding days 20,000 units of antitoxin daily. Two weeks following the onset of his illness he complained of blurring of near vision and some difficulty in talking. Three weeks later he began to have difficulty in swallowing. He said that fluids regurgitated through his nose. Five weeks after the diphtheria started he noticed numbness in the finger tips and feet with a gradual onset of weakness in the extremities. He had lost thirty pounds in weight. The examination of the patient at entrance was as follows:

He came into the examining room in a wheel chair. He appeared poorly nourished, but mentally he was normal. His speech was rather of the dysarthric, bulbar type. Facial expression was somewhat smoothed out. He held the head inclined to the right and somewhat upward. The region of the cheeks and temples appeared somewhat sunken. The pupils were somewhat irregular. They reacted to the light and in accommodation. The extraocular movements were normal except there was some limitation of right lateral movement of the eyeball and a few fine nystagmus movements. The jaw deviated slightly to the right on opening and he felt pin point plainer on the right side of the face than the left, the change coming in the mid line. Light touch was normal on both sides of the face. The corneal and supraorbital reflexes were normal on both sides. He had a left lower facial paralysis. The otologist reported a left mid ear deafness with some evidence of an old inflammatory process. The soft palate hung in the mid line and on phonation there was no movement. He had marked difficulty in swallowing. The X-ray showed the epiglottis to be paralyzed with no evidence of esophageal paralysis. There was also X-ray evidence of paralysis of the left leaf of the diaphragm. The left sternocleidomastoid muscle and the upper portion of the trapezius was completely paralyzed, the right was normal. He held his head slightly forward and on attempting to tip it back, when it reached a certain point, he was unable to hold it up. The tongue protruded to the left and there was considerable atrophy and fibrillary tremors of the left side of the tongue. The pulse rate was eighty beats per minute and pressure over the eyeball caused no slowing of the rate. The ocular fundi showed no gross lesion. There was some wasting of the muscles of the hand, especially the thenar eminence. The grip was weak. All movements of the upper extremities were weak and incomplete. The upper extremities were flaccid. The biceps jerks were absent and the triceps were markedly diminished. The legs were quite flaccid, the left more so than the right. The knee and Achilles jerks were absent and there was extreme weakness in all movements of the legs. The plantar reflex was absent. Sense of motion and position was absent in the toes. Vibratory sense was lost in the ankles and diminished in the wrists. There was no incontinence or retention of urine. He could not stand on account of marked weakness. The blood pressure was 112/70. The urine and blood examinations were negative. The heart, by electrocardiograph examination, showed an inversion in the T wave in leads one, two and three. The opinion at this time was that he had marked myocardial changes. The spinal fluid showed six cells per cubic millimeter. The carbolic test was very heavy. Nonne-apelt one and two likewise was heavy. The sugar content of the spinal fluid was within normal limits. The Wassermann test on the blood and spinal fluid was negative. The mastic test was 0111222. The gold sol curve was 2330000. The patient was placed on 1/30 of a gram of strychnine three times a day and general massage. On Jan. 7, 1924, there was considerable improvement in the condition of his swallowing and voice. The paralysis of the left sternocleidomastoid muscle was much improved. There was practically no facial palsy. There was no change in the condition of the extremities. He complained of numbness and cold feeling up to the pelvis. Sensation in the distribution of the fifth cranial nerve was at this time normal. The grip was practically nil in both hands. Sense of motion and position of the fingers was lost. Vibratory sense was lost in the wrist and elbow. The tendon reflexes were still absent. On January 15, 1924, it was noted that he continued to improve, the main disability being in the lower extremities. Sense of motion and position of the toes had returned, but the tendon reflexes were still absent. Examination, February 6, 1924, showed that he had gained about fifteen pounds in the last seven weeks. He complained of numbness in the fingers and toes. Both biceps and triceps jerks were diminished. He made all movements of the upper extremities. The ocular cardiac reflex was the same as on previous examination. By February 16 he was up and around the ward and had no complaints. The electrocardiogram showed normal tracings. The vocal cords moved freely and properly. The soft palate raised straight on phonation. His gait was normal, but the tendon reflexes in the lower extremities remained absent. The spinal fluid at this time was about the same as on previous examination. The gold sol curve was now 001221 and the mastic test 55432000.

DISCUSSION

There appears to be little doubt in the diagnosis of post-diphtheria paralysis when the history of diphtheria, or even the suggestion of same, is obtained together with the onset of bulbar paralysis and the quite characteristic associated disturbance in accommodation; followed later by a generalized multiple neuritis. The former manifestations are often spoken of as the early and latter as the late stages. The early set of symptoms are said to come on within the first ten days of convalescence and the late to manifest themselves within fifteen days to three months after the onset of the diphtheria. Among the cases observed in this group, which represent a most severe type, makes one inclined to place the limits somewhat higher.

It will be observed this patient's early treatment with diphtheria antitoxin was quite inadequate and there was some delay in starting it. However, more cases of diphtheria paralysis are being observed in spite of the widespread use of diphtheria antitoxin. It has been our observation that there is little relationship between the resulting paralysis and amount of antitoxin given, but more between the time treatment is instigated. The explanation is not lost sight of that antitoxin treatment is responsible for many cases being carried through the

acute diphtheria stage which subsequently develop paralysis that without antitoxin would have been fatal.

The above case, among other things, shows rather widespread and unusual involvement. Paralysis of the tongue is quite rare, never an isolated manifestation, but associated with other phenomena. According to Leoorat[3], Vernet[4] notes cases by Harris, Henschen, Kast and Kinder. Mention is also made in the thesis of Ardisson[5] of cases observed by Sicard and Barbe, also of Desor and Vial, also the observations of Mourefoard, Gurnier and Leoorat[6], another case by Moureguard in These Respant 1922. The face is rarely attacked, but may be unilateral or bilateral and of the peripheral partial type. Thorp[7] reports a right sided complete facial paralysis involving the sense of taste which followed diphtheria by six months. Middle ear diseases as a complicating factor must always be considered in these cases. Leorat[3] feels facial paralysis is never isolated and generally incomplete. The fifth nerve is rarely involved and when disturbances are observed there is associated hypoglossal involvement. This case showed some sensory disturbance in the distribution of the fifth nerve.

Attention is called especially to the unilateral spinal accessory paralysis. Leorat[3] points out how infrequently it has been observed and recalls one case of Moureguard's which was associated with hypoglossal paralysis. When present its observation should easily be noted by a rather characteristic attitude of the head, namely slightly retracted and rotated to the side paralyzed due to paralysis of the sternocleidomastoid muscle and upper half of the trapezius. This case was also associated with hypoglossal paralysis on the same side.

In the series of cases previously referred to of Mixsell and Giddings they had eight cases of diaphragmatic paralysis all terminating in death, on an average, within thirty-six hours, in one case lasting eighty hours. In the series referred to in this article paralysis of the diaphragm occurred in the above case without fatal termination. Another case coming under observation about five weeks after the attack of diphtheria died within three days of pneumonia complicated by paralysis of the left leaf of diaphragm as demonstrated by X-ray. This case also showed quite extensive multiple neuritis. Marriott in 1920 advises artificial respiration in these cases to tide over respiratory embarrassment. The prodromal symptoms of diaphragmatic paralysis consisting of abdominal pain, dyspnea and rapid heart action should call for careful observation of the patient during the critical time so respiratory accidents may be avoided.

It is noteworthy that according to Regan, Regan and Wilson[8] (Am. Jour. of Diseases of Children, April, 1923), little has been done on the chemical, cellular and serological changes in the spinal fluid of post-diphtheria paralysis

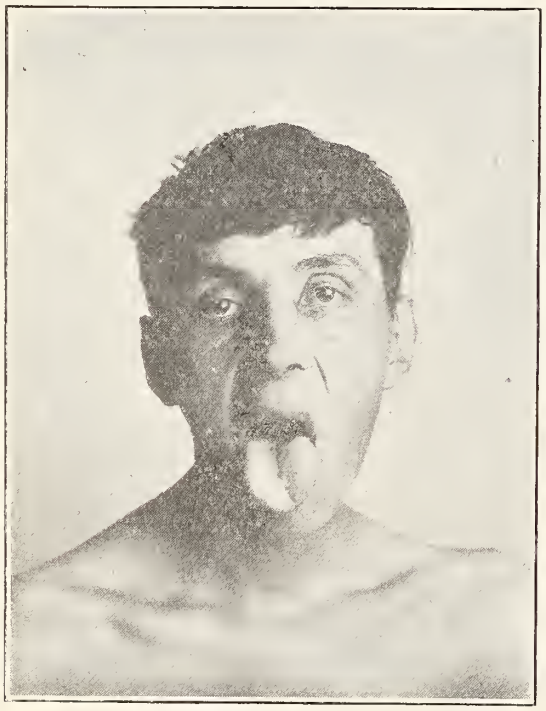

FIGURE 2.

Showing paralysis of the left side of the tongue (tip of the tongue toward the paralyzed side, non paralyzed side broader).

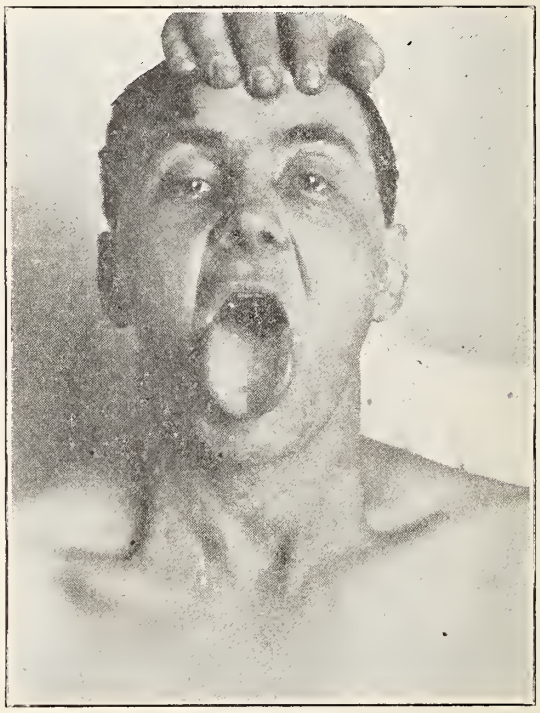

FIGURE 3.

Photograph four months following attack of diphtheria showing return of function of the left sternocleidomastoid muscle and the muscles of the tongue.

cases. They examined a series of spinal fluids from sixteen patients and concluded changes to be limited to an increase in globulin, in less than one-half of the cases slight to moderate degree and that the colloidal gold reaction was the most constantly pathologic change. The reduction usually taking place in the syphilitic zone. They were of the opinion that previous observation on the gold curve reaction had never been recorded. The observation in seven cases in this series in which spinal fluid examination was made agrees with their observations indicating the changes to be chemical rather than cytological with constant but slight changes in the gold sol curve reaction, the mastic in two cases not agreeing with the gold sol curve, but showing more marked change in the first tubes.

Post-diphtheria paralysis, while a very disappointing complication of diphtheria, carries with it, nevertheless, a hopeful prognosis. It is obvious from the above case that the prognosis is not necessarily dependent on the extent of involvement. It is the writer's opinion that more depends on the case and avoidance of accidents which are likely to occur. Rest in bed, tube feeding when necessary, and avoidance of any exertion on the part of the patient for many months, together with administration of tonics, preferably strychnine, will see even the very severe cases on the road to recovery.

CONCLUSIONS

1. Report of a case of post-diphtheria paralysis of extensive and unusual involvement with some observations on a series of twelve other cases.

2. Associated unilateral paralysis of the VII., XI., XII. cranial nerves and the phrenic nerve (rare sites of involvement), was observed in this case.

3. Paralysis of the diaphragm constitutes a serious prognostic sign.

4. The changes in the spinal fluid in post-diphtheria paralysis are chemical rather than cytological and the gold sol curve shows changes in the luetic zone.

5. The prognosis in post-diphtheria multiple neuritis is good and not dependent on extent of involvement.

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ACTINOMYCOSIS IN MAN*

A Preliminary Review of Cases From the University Hospital of the University of Michigan by

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Actinomycosis is usually looked upon as one of the exceedingly rare types of infection in man, but a review of its literature would seem to cast doubt upon this view and to indicate that it is not an uncommon disease. In recent years especially reports of cases and groups of cases are very common, probably due to increased thoroughness of observation rather than any real increase in the incidence of the disease. In order to gain some idea as to its frequency in Michigan we have gone over the records of the Department of Surgery and the Department of Pathology and have been able to collect evidence of Actinomycosis in fifty cases, all of these cases, with but one exception, were inhabitants of Michigan at the time the infection occurred, the exception being a case residing in Ohio. These cases represent only those in which positive pathological evidence of the presence of Actinomycosis bovis has been secured and we feel certain that many more cases of this infection have been overlooked because of insufficient investigation and because the possibility of Actinomycosis has not been considered so that this must represent only a moderate percentage of the cases with actinomycotic infection which have been observed in this clinic.

Actinomycosis may be defined perhaps best in the words of Wright as a "suppurative process combined with granulative tissue formation, the pus of which contains the characteristic granules or "drusen" composed of dense aggregates of branched filamentous micro-organisms and of their transformation or degeneration products." The disease, "lumpy jaw," is known to be fairly common in cattle and was first described by LeBlanc in 1826. The characteristic granules were noted in a case of spinal caries in man by Van Langenbeck in 1845 and by Lebert in 1848, but the specific organism was not discovered until 1876 by Harz in granules found by Bollinger in cattle affected with the disease. The name of actinomycosis bovis was given to the organism by Harz. Prior to this time in 1868 Rivalta had also made studies of the granules found in the lump jaw of cattle which were the basis for an attempt to claim priority and in 1878 he suggested the name of Discomyces bovis. Israel and Wolff in 1878 isolated the organism from pus from empyema in man. Acland in 1886 published records of the second case of infection in humans and Nocard two years later described the first case of human actinomycosis

in France. The latter's careful studies on mycelial disease in general have caused some authorities to attach the name "nocardia" to certain of the mycelial infections. Following this time reports of actinomycosis in man became more common and investigations into the biological characteristics of the infecting agent were carried out by numerous workers. There has not been an entire unanimity of opinion among biologists in regard to the essential characteristics of the organism causing the typical lesions in man. The first important studies were published by Bostroem in 1890, during which he isolated organisms from eleven cases of actinomycosis of the jaw in cattle. In brief, he obtained a streptothrix, aerobic in character, growing at room temperature which he found to be closely allied to mycelial parasites of grains and grasses. This relationship was used by him as a basis for the theory that the disease was carried to the tissues by these foreign bodies.

Wolff and Israel in 1891 reported the isolation of an anaerobic streptothrix from two cases in the human. This organism was difficult of cultivation, not growing at body temperature, and animal inoculation showed at autopsy typical lesions of actinomycosis. The classical work of Wright, published in 1905, agrees with the work of Wolff and Israel and establishes the biological characteristics of this organism on a sound basis. He isolated the organism from thirteen cases of actinomycosis in man and concludes that one species of the micro-organism is responsible for the typical actinomycotic lesions in man. Wright does not accept the work of Bostroem and believes that he worked with contaminated organisms or secondary invaders. Since this time there has been much controversy among bacteriologists regarding the nomenclature of this group of organisms. Until recently, following Wright and others, the family name, actinomyces, comprised two genera with actinomyces bovis as the type species and nocardia for other members of the group. The committee on nomenclature of the American Society of Bacteriologists in 1920 recommended that all organisms of this type be now classified under the term, actinomyces.

Colebrook in England in 1920 and 1921 reported further extensive studies of actinomyces in man, largely substantiating the work of Wright. In summary it seems likely that the vast majority of cases of actinomycosis in man and animals are caused by the type, actinomyces bovis, which forms typical "sulphur granules" with club-shaped ray, anerobic, difficult to culture and not acid fast. This organism is the one causing the lesions in cases reported here by us.

The first case of actinomycosis to be brought forth in America were those reported by Murphy of Chicago in 1885. In 1899 Ruhrah published a collection of 58 American cases, collected from all available sources. He added to this four cases in 1900, thus bringing the total to 62 cases. His thorough discussion of the subject bore fruit and shortly numerous further cases were reported. Erving in 1902 brought the literature to date and brought the total number up to 100 cases. Isolated case reports and articles dealing with its clinical aspects were not infrequent and in 1921 Sanford and Magrath collected 119 cases from the literature and were able to add 96 cases of the disease observed in the Mayo Clinic. Since then, in 1923, Sanford, in an attempt to study the distribution of actinomycosis in the United States, has collected a grand total of 678 cases from every available source. This number must represent only a comparatively small proportion of the number of individuals afflicted with the disease, as no doubt, many of them escape diagnosis, and a large number are not reported. In his study of the distribution of the disease he finds it especially prevalent in the upper Mississippi valley, but the actual distribution cannot be known until diagnosis is more common and a system of reporting is established. In this series we find a general distribution throughout the state, no one section seemed immune. The important point would seem to be that, contrary to our previous ideas, the infection is not uncommon and that, once we are on the lookout for it, many more cases will be recognized than at present. The anatomical distribution of the infection is shown in Table I.

This anatomical distribution does not differ largely from that found by others, except that we have a definitely larger percentage of abdominal infections, but the number in the series is too small to permit the drawing of conclusions from such a fact. A comparison with other statistics is given in Table II. The chief interest about the anatomical location has seemed to us to be that it is universal, no region of the body is exempt, and while no case of involvement of the brain or central nervous system has come under our observation, a number of cases of actinomycosis of the brain are recorded. We look for it especially in lesions about the mouth and right side of the abdomen, but the possibility of its presence in lesions in any other part of the body must be considered.

A detailed report of the cases and any statistical analysis of them is beyond the scope of this paper, but certain general statements can be based on the findings in them. The disease may attack individuals of any age, but it more often is found in young adults and in those of active middle life, the youngest was ten years, and two others were under fifteen years. Only four of the series were women. Infection

among those working with the soil and its products predominated, but no conclusions should be drawn as this is true of this clinic's cases as a whole, and recent statistics by others seem to show that association with grain and the animal industry is not necessary to the infection.

METHOD OF INFECTION

A mass of evidence has been collected by many observers regarding the source and mode of infection, some of which is conflicting. Direct transmission to man from lower animals has been denied by many, and if it does occur, is exceedingly rare, although Mattson in a recent article gives evidence of frequent occurrence in those associated with infected cattle, while but one case, that of McKenty, is reported of direct infection from man to man. The two main theories of manner of infection are those of Bestroem and Wolff and Israel, both amplified by later writers. In brief, Bestroem's theory is that the infection is carried into the tissues by grass or grain and its coverings, supported by the facts that such types of foreign bodies have been found in the lesions in animals and that the endemicity of lumpy jaw in cattle fed in certain marshes has been noted.

Many cases are observed in man in which grass or grain or straw has been found at the site of the infection. The evidence is circumstantial and it may be argued that these foreign bodies merely cause the abrasion through which the infecting micro-organism enters. The theory of Wolff and Israel, later strongly advocated by Wright, is that the organism causing the typical lesion in man does not grow on grasses, is most difficult of cultivation and it is difficult to conceive of any connection between this organism and those found on grasses and grains. It is believed by these workers that the actinomyces bovis is a natural inhabitant of portions of the gastro-intestinal tract, especially in the mouth, and given proper conditions, such as lowered resistance and a portal of entry, the organism may cause progressive lesions. Its presence in carious teeth and tonsils was found by Lord, but the experiments were not carried to a logical conclusion. In our series the organism was found in the tonsils in six cases only in seven thousand examined, which would seem to cast doubt upon the frequency of the tonsils as a focus. There are two recorded cases, one by Cope and one by McWilliams, in which actinomycis developed on the knuckle following an abrasion on the tooth of an adversary. Investigators of the flora of carious teeth do not report the presence of actinomycoses in any frequency. In any case it would seem that the organism requires firstly, the conveyance to a portal of entry in the body, and secondly, an abrasion of the tissues must be present. It is possible that the continued irritation of any foreign body makes the progress of the infection more likely. In one of our cases a farmer ran the tines of a pitch fork into his forearm while stacking straw. The wound was infected and discharged purulent material for four weeks, then the discharge ceased, leaving a nodule about 3 cm. in diameter. It remained quiescent for four months, when it began to enlarge. When seen eight months after the injury, the mass was roughly, 8 cm. in diameter, presenting signs of a low-grade inflammation. The mass was excised and shown to be actinomycosis, but no foreign body was found in the lesion. Another interesting case was that of a child who had aspirated portions of a peanut shell. She developed signs of a pulmonary infection, which was diagnosed as purulent pneumonia, with abscess and which at autopsy showed definite actinomycotic abscess of the lung. The portal of entry varies, and as shown by the location of the lesion the mouth is the most frequent site, followed closely by the lower portion of the gastro-intestinal tract, and third, the respiratory passages, followed by other parts of the body. It is noticeable that carious teeth are usually found associated with lesions of the buccal cavity acting as a carrier of the infection or as a producer of the necessary abrasion for the portal of entry. Infection following extraction of teeth is not uncommon. In many of our cases of infection around the jaw the presence of poor dental condition was noted. The invasion of the intestinal tract takes place from within and the appendix and caecum are the commonest sites. In two cases the appendix was removed for acute appendicitis, the actinomyces being found during the course of a routine examination. These cases were early and both recovered. The other cases of abdominal infection all had been operated upon for appendicitis with the persistence of sinuses and with extension of the infection to adjacent parts. The histories of the acute attacks were not typical of acute appendicitis in most cases, but seemed compatible with such a diagnosis. That other portions of the gastro-intestinal tract may be involved and that the appendix is not the sole offender seems unquestioned. One peculiar case was that of E. B., age 37, a machinist who presented an incarcerated left inguinal hernia. At operation an inflammatory mass of omentum was found in the sac and completely excised. The examination of this showed "chronic omentitis, large colonies of actinomyces". His recovery was uneventful and he is well after three years. The original focus must have been some portion of the gastro-intestinal tract, perhaps the appendix, but not necessarily so. The appendix or its neighborhood seems to be by far the commonest site for infection. Primary involvement in the stomach is unknown and of

the upper portion of the gastro-intestinal tract, rare. It is possible that an attack of appendicitis provides the necessary destruction of tissue favorable to the invasion of an infecting agent already present and that the actinomyces are not always the original etiologic factor in the original lesion. We have included two cases of perirectal actinomycosis with the gastro-intestinal group, inasmuch as it seemed logical to suppose that infection in these cases occurred from within outward, although in neither case was there direct evidence of this at the time of examination.

The thorax may be invaded by way of the aesophagus or by means of the respiratory tract through the aspiration or inhalation of the infecting agent with or without a foreign body. Skin infection is not common and probably always occurs through abrasions. Infections in other parts may be either metastic or by contiguity from other organs. Some of the infections of the abdominal wall may be infections from without inwards and the location of the two of these in the waist line made us believe that irritation by the belt might be a factor in their production. The actinomyces tend to spread by continuity, especially in connective tissues, but rarely along lymph channels. The lymph nodes are not commonly involved, except by the secondary invaders which are usually present and which may dominate the picture. The peritoneum offers some resistance to it as the extension is more in the retroperitoneal tissues. In any given process local healing may be found at the periphery of portions of the lesion and ultimately a marked tendency to haematogenous metastases occurs.

The clinical symptoms vary markedly with the site involved. In the infection around the mouth the teeth are usually in wretched condition, a history of extraction may precede the onset. The lower jaw and its surrounding tissues are usually the portions involved, the infection entering the floor of the mouth or along the opening. An indurated swelling, usually circumscribed, is present, is smooth and hard, "woody phlegmon." In from two to four months often breaking down and sinus formation takes place. The swelling is not marked internally and sinuses in the mouth are uncommon. Ulceration of the skin is not common except following operative procedures. Secondary infection is usually present. Trismus is often a prominent symptom. The bone may be infected early or late and sequestration thus occurs. Tonsillar infection may cause late involvement of the soft parts in the region of the angle of the jaw.

The involvement of the gastro-intestinal tract may present two clinical pictures that may be called the acute and chronic types. The acute type may be illustrated by the history of E. S., age 20, whose family history was negative. The past history was negative except that three months previously he had an attack similar to his present illness, but of a milder nature. The evening before entrance he began to have generalized colocy pains in his abdomen. During the night he was nauseated and vomited. By morning the pain had localized in his right lower quadrant and examination showed a young man of robust physique with muscle spasm and tenderness over McBurney's point. His temperature was 99.6 F. and his leucocytosis 12,400. A diagnosis of acute appendicitis was made and at operation an acutely inflamed appendix was removed. His convalescence was uneventful and he is well one year after the operation. The appendix showed "chronic recurrent appendicitis with recent suppurative exacerbation." Abscess in the meso appendix and in appendix wall. Small colonies of actinomyces found in abscesses, colonies small." In other words, the history, examination and findings are those of a typical acute appendicitis with the actinomycosis only found by routine pathological examination. The process was early and was apparently entirely abolished by operation.

The chronic form may be illustrated by the case of H. F., a laborer, age 51, who gave a history of trouble starting five months before examination. At that time he began to have cramping pains of moderate severity generalized over the abdomen, but most marked in the right lower quadrant. He remained in bed three days, was then up and about for a time, had several similar attacks at irregular intervals. No nausea or vomiting was ever present. One month ago, noticed a tumor mass in the right flank and right lower quadrant. Since then there has been a dull constant pain in the region of this mass. Lost 30 pounds in weight in the last five months. Examination showed a man somewhat emaciated with a mass, roughly spherical in shape and 10 cm. in diameter in the right flank and lower quadrant. This was tender, but not exquisitely so, hard firm, but of a uniform consistency. A mass could be felt by rectal examination. His temperature was 100.8, his leucocytosis 12,000. Incision into the mass disclosed loculated cavities containing thick yellow viscous pus containing typical granules. The walls of the cavities bled profusely on exploration with finger. Nothing further was done at this time. He gradually grew weaker and died three months later. Autopsy showed abscesses around the appendix, in the liver and in the lungs, abdominal wall, with typical actinomyces present in all of them. In this case the history is that of a somewhat insidious onset with the development of a tumor in the right lower quadrant. In this case actinomycosis might well have been suspected before the final proof was made by the actual finding of the granules. There must

be all stages between these types. Several other cases presented sinusis failing to close after appendectomy had been done for acute appendicitis with abscess formation and in this type of case this lesion should always be considered.

In the thoracic form of the disease in those cases with the lesion confined to the lung the symptoms are often those of bronchiectasis with foetid sputum, or perhaps there may be evidence of a lung abscess as in the case mentioned. The other and perhaps commoner form is that in which the chest wall is perforated with formation of abscesses in it, at the same time the lung, usually the lower portion, may be widely invaded. The typical findings in the pus from these abscesses or in the sputum will give the correct diagnosis.

The clinical findings in other localities are those characterized by a chronic low grade infection with sinus formation in that particular region, with special symptoms peculiar to that region. In this series were two cases of actinomycotic infection of the spine, both diagnosed as tuberculosis. The X-ray findings were compatible with tuberculosis of the spine and in only one was the diagnosis of actinomycosis made before death by the finding of the granules in the discharge from a spoas abscess. Autopsy fixed the diagnosis in both of the cases.

The diagnosis is often not easy and cannot be made with certainty until the sulphur granules of actinomyces bovis are demonstrated in the pus from the abscess or found in tissues from the lesion. In the cervical region the diagnosis is often confused with tuberculous adenitis, alveolar abscess and sarcoma. Actinomycosis does not suppurate until late and the lymphatics are not primarily involved. When the lesion is broken down the diagnosis is easier as the granules may be found in the pus, but in the indurated lesions without a discharge biopsy would seem necessary for diagnosis. In either instance, that is a search in pus for granules or a biopsy, a single negative result does not discredit this diagnosis, as many specimens may be negative before a positive finding is made. This is especially true of those cases with severe associated pyogenic infection which may disguise the true character of the infection. We have found the organism after many negative investigations in suspected cases. Dilution of the suspected pus in water may bring out the granules, whose character should be confirmed by further examination with the microscope. We have made a tentative diagnosis in several cases by the presence of a sign noted during incision of the abscess. The abscesses are usually loculated and in every case the hemorrhage occurring while the examining finger investigated the extent of the abscess and broke down the wall of the loculi, was far more marked than one ever will see in a simple pyogenic abscess. The bleeding is often severe enough to make one think of a vascular sarcoma. This sign has in several recent cases made us investigate until actinomycosis was definitely diagnosed. We have not seen this sign described elsewhere, but we feel that it has definite diagnostic value. The abdominal lesions are usually confused with tuberculosis, or less often, carcinoma, especially with a palpable mass in the right lower quadrant. But its palpable characteristics are usually sufficient to discriminate between its smooth contours and the more nodular surface of the carcinoma. A barium enema will usually show the large bowel to be more definitely involved with obvious defects in case of carcinoma. The lesions of tertiary syphilis have to be distinguished at times from actinomycosis. The gumma is less painful and if it breaks down, presents an ulcer with a typical base rather than the sinus formation present with actinomycosis. One of our cases showed a positive Wassermann reaction and was shown to have both infections. In summary any indurated lesion in the region of the jaw and any smooth tumor mass in the right lower quadrant should be suspected. If following appendectomy, a sinus persists, or if in any part of the body an abscess continues to drain unduly long, careful investigations should be made to prove or disprove actinomycosis.

The treatment is not satisfactory and the best results are obtained in the lesions around the face and neck. It goes without saying that fresh air and good food are important. Surgical treatment consists of incision and drainage and whenever possible, excision. Incision should be adequate and the loculi should be opened to admit of proper drainage and the use of antiseptics locally. Extensive operations designed to abolish the disease in well advanced abdominal cases are not successful and do harm. The intestine is not usually markedly involved and its resection will rarely remove the disease. Antiseptics have been recommended; both iodine solutions and copper sulphate have been lauded. In our cases they did not seem to be of any special utility. Of drugs, potassium iodide has been used in nearly every case recorded. The dosage varies enormously with different writers. Some regard it as a specific, others are sceptical. Certainly it should be tried and, we believe, in large doses. X-ray and radium have strong advocates, but it again is impossible to say whether they alone have helped, as all cases thus treated are treated along other lines. We have utilized X-ray, but cannot state whether it helped or not. Colebrook used vaccines in twenty-five cases in conjunction with surgical treatment and feels that his results were improved thereby. He regulates the dose by the patient's reaction, starting with small doses of half a million

fragments. We have had no experience with the vaccine. Undoubtedly all of these measures may be used in conjunction and this intelligent synchronization will give the best results.

The prognosis is good in those cases with infection around the face, as these localized lesions spread very slowly and tend to heal. The prognosis of abdominal cases with sinus formation is bad; one is tempted to say utterly bad, but cases are on record of recovery, but never after the lesion has ceased to be well localized. The thoracic cases all have a gloomy prognosis, recovery being almost unknown. Local superficial lesions elsewhere, like those on the face, carry a fairly good outlook.

SUMMARY

Actinomycosis is not an uncommon disease in Michigan. Infection usually occurs along some part of the alimentary tract.

Actinomycosis should always be suspected in cases showing tumors in the region of the neck, face, jaw, thorax or the right side of the abdomen and flank.

All abscesses tending to chronicity should be investigated for its presence.

The occurrence of an undue amount of bleeding following incision and drainage of abscesses should make one suspect actinomycosis.

Better dental hygiene and abstaining from chewing straw, grains and grasses may reduce its incidence.

Local lesions, diagnosed early, are curable. Well established internal lesions are fatal.

We wish to express our thanks to Dr. Warthin, Director of the Pathology Laboratory, for his kindness in allowing us the use of his files and material.

TABLE I.

Regional Distribution of the Infection.
The primary location is noted as accurately as possible. Extension to other parts not tabulated.

Cervico-facial:		
Jaw	6	
Neck	3	
Cheek	1	
Cheek and Superior Maxilla	2	
Tongue	2	
Tonsils	6	
	20	or 40%
Abdominal:		
Abdominal wall	3	
Abdominal wall with scrotum and perineum	1	
Right Iliac Fossa	7	
Appendix	2	
Omentum	1	
Liver	1	
Ischio-Rectal	2	
	17	or 34%
Thorax:		
Lung and Chest Wall	4	
Lung	1	
	5	or 10%
Genito Urinary Tract:		
Kidney	2	
Perinephric Space	1	
	3	or 6%
Skin:		
Forearm	2	
Gluteal Region and Thigh	1	
	3	or 6%
Bones:		
Vertebrae	2	or 4%
Total	50	

TABLE II.

	Cases	Head and Neck	Thorax	Abdomen	Pelvis	Extremities	Skin	Bones	Genito-Urinary	Unknown
New and Figi	107	68.1	7	20.3	2.5	1.9	0	0	0	0
Erving	100	53	20	23	0	0	4	0	0	0
Illich (Ruhrah)	421	55	15	20	0	0	2.5	0	0	6
Pres. Series	50	40	10	36	0	0	6	4	4	0

Table II. Comparison of Anatomical Distribution with Other Series of Published Cases.

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A PRELIMINARY REPORT ON THE VALUE OF ETHYLENE AS A GENERAL ANESTHETIC BASED ON THE STUDY OF 500 CASES

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On each occasion when some new candidate for favor in the field of general anesthesia is brought forward, it is proper that we should reassess the values of the general anesthetics now at our disposal with a view to seeing whether or not there is some portion of the field not satisfactorily occupied which the new candidate may occupy if claims be substantiated.

The oldest inhabitants of this field, entitled to respect at least because of their age, are chloroform and ether. True, their reputations have suffered considerably from the encroachments of modern science, but they still hold positions which are relatively secure and likely to endure.

In the case of chloroform it will be a long time before it is driven from the field for use in the tropics and in war. Its superiority over ether in tropical climates is beyond question and its superiority in war is, in my judgment, equally beyond question. In the latter field its relatively small bulk and consequent ease of transportation makes it available where the bulk of ether would result in its being generally marked "missing." In the recent European unpleasantness, chloroform played a great part, partly for the reasons just mentioned and partly because of the much shorter time re-

quired to get full surgical anesthesia. Under ordinary circumstances this loss of time is unimportant, but where, as during the years from '14 to '18, many of the hospital units on both sides were trying to deal with twice as many casualties as they could handle, the saving of from three to five minutes on each operation will, in an active "establishment," mean the increase of casualties properly dealt with by from forty to a hundred. This means so many lives saved which would have otherwise been lost. In this respect, therefore, its position is secure. In somewhat similar fashion it will always be the convenient anesthetic for emergency use in out-of-the-way places with exploring parties and any folk, in short, who live more or less at war with their surroundings.

The case for ether is even more secure. It may safely be regarded as the "wheel-horse" of anesthesia which for years has done the bulk of the work to the enormous benefit of humanity.. Its greatest claim is that it is extraordinarily safe so far as the immediate result is concerned, and like its more modern contemporary in the field of transportation, the Ford car, it is almost absolutely fool-proof. These are great qualifications and will long maintain for it a position of qualified respectability. On the other hand, a more searching investigation of its position shows it to be assailable at several points—it is unquestionably true that the direct mortality following immediately upon the administration of ether is so small as to be almost negligible, but the number of casualties ultimately referable to its use is by no means unimportant. Many of the disturbances of the lung occurring after operations done under ether are more or less direct consequences of its use and should be charged on the debit side of the column. It is our best judgment that in many patients whose death certificates show various forms of pneumonia the results are primarily attributable to the irritating properties of the ether used at operation. There is, of course, a definite group of cases with known disease of the lungs in which there is an almost absolute contraindication to its use. Its unfavorable affect upon the kidney, as shown by the common occurrence of albumin and possibly of casts in the urine after operation is, we suspect, an over-rated source of real danger. The transient renal irritation which regularly occurs with both chloroform and ether is probably negligible and it is not difficult to recall many patients with grave renal damage who have withstood prolonged ether anesthesia without obvious harm. Clearly the position of ether is secure as the common anesthetic for general use under a great variety of conditions.

During the last generation the position of ether as the anesthetic of election has been definitely challenged by the introduction of the newer methods of anesthesia with nitrous oxide gas combined with oxygen, but many circumstances have conspired to make this challenge relatively unable to shake the established position of ether. The administration of these gases requires relatively complicated and cumbersome apparatus. In order to obtain results which can be regarded as tolerable, very considerable skill and long experience are necessary. It is not, and is not likely to become the anesthetic of every day use, and its administration is practically confined to hospitals, or at least such conditions as enable an expert anesthetist to be available at all times. Moreover, its claim to safety cannot be admitted without discussion. This claim has been distinctly clouded by the tendency to include in the statistics of the subject a very large number of cases in which the anesthesia was so brief and trivial as to hardly deserve to be called an anesthesia at all. If we are to estimate justly the claims of nitrous oxide and oxygen to safety, we must begin by discarding all the cases in which it is given for operations lasting only a few minutes and in which the problem of the accurate mixture of gases hardly arises at all. If we confine the discussion of its claims to cases in which the duration of the operation exceeds thirty minutes we are likely to find that its claims to safety will not stand comparison with ether, or even with chloroform. It is our well considered judgment that even in the hands of the expert anesthetist this anesthetic is more dangerous than either ether or chloroform.

It is important, however, to recognize that this statement should not be taken to very seriously shake the position of this anesthetic in the field. Its claims are substantial and entitled to recognition for short operations. The entire absence of the disagreeable features associated with ether and to a less extent with chloroform, are really important. It is clearly the least unpleasant of any of them. It has a recognized and assured position in cases of known disease of the lung and is entitled to serious consideration in known disease of the kidney. Perhaps its greatest stronghold is in cases complicated by shock, that clinical entity, the exact nature of which remains obscure. Its claim to being at the present time the anesthetic of election in shock was secured by the experience in the late war. Here, in a very large group of cases, it was shown beyond peradventure that the mortality of operations on patients in shock done under anesthesia with nitrous oxide and oxygen was importantly less than those in which either chloroform or ether was used. This observation appears to have a sound scientific foundation. It is known that both chloroform and ether, used over any considerable length of time, make a serious draft upon the alkaline reserve and that this in turn

unfavorably affects shock production. It has been satisfactorily shown that though nitrous oxide and oxygen draw somewhat upon the alkaline reserve, that this draft is importantly less than with the other anesthetics. At the present time, therefore, and leaving the new candidate for favor, ethylene, temporarily out of consideration, we may safely assert that for operations on patients in shock or upon patients in whom the occurrence of shock may be anticipated, nitrous oxide and oxygen is clearly the anesthetic of election wherever its safe administration is possible.

This brings us to the consideration of the requirements which should be met by any new candidate in this field asking for serious consideration. It must, we think, be shown for such a candidate that it has properties not possessed by previous occupants of the field. In the case of ethylene it comes up for consideration with the claim that it can displace the nitrous oxide and oxygen from its present position. If it is to do so, it will be required to "pass muster" on various special tests which may be briefly enumerated as follows:

1. It must be shown that its administration is free from the disagreeable effects of ether and that in this regard is on a par with nitrous oxide and oxygen.

2. It must be shown that its administration is at least not more complicated and difficult than the above mentioned anesthetic.

3. It must be shown that it is relatively safe and, if it is in fact to displace nitrous oxide and oxygen, it must be shown that the risk is definitely less.

4. It must be shown that it will give greater degrees of muscular relaxation than have been previously obtained with gas, "this being perhaps the annoyance most commonly noted by the surgeon and which has importantly limited the availability of "gas."

5. Finally it must be shown that its affect upon shock, whether existant or anticipated, is relatively favorable and that it can here compete on an equality with "gas."

The following observations are put forward as a contribution to our present knowledge of ethylene as an anesthetic. We quite recognize that many candidates for favor in the field of anesthesia have made a relatively favorable showing in the earlier part of their career, only to be permanently discarded because they finally developed some grave disqualification. We are quite aware that no conclusions can be drawn from any series as small as 500 cases, but we believe that the reporting of small groups of this kind by a great variety of observers under differing conditions will at a relatively early period enable us to draw satisfactory conclusions.

GENERAL REPORT OF 500 ANESTHESIAS GIVEN IN OUR CLINICS

Of a series of five hundred anesthesias with ethylene and oxygen, it is very easily observed that the patients make much better recoveries and have less lowering of vitality and general tone than when using any other anesthetic.

In this group of cases only two per cent vomited or complained of nausea and the longest period was twelve hours after operation. The balance of this group cleared up readily, often asking the surgeon questions in the operating room five minutes after stopping the anesthetic, orienting themselves readily.

Operations on Prostrates—At no time is the choice of an anesthetic a matter of greater importance than in the case of elderly men who come to the urologist for aid. The renal pathology with the cardiac and vascular system at low par requires an anesthetic which will not disturb the heart action, irritate the lungs, cause too high blood pressure or depress the excretion of urine. Twenty-six rather low grade cases treated by operation could take water in large quantity within half an hour after the operation, which prevented the dehydration that usually takes place when the patients vomit for twenty-four hours. They do not perspire while taking this anesthetic as a rule, and are dry and warm. Therefore, they do not go into shock easily.

Operations on Gall Bladders—In the twelve cholecystectomies we were obliged to give some of the cases a low grade ether for ten or fifteen minutes when the reflex disturbance of respiration interfered with the progress of the operation. In this way we would use from one half to an ounce of ether during the operation. In two of this type of case we were obliged to change to an open ether for a period of a half hour. After the adherent gall bladder was removed, the remainder of the operation was completed under ethylene and oxygen. Fifteen minutes after stopping the operation the patient answered questions readily, but showed some remaining saturation of ether. Recovery was uneventful with no vomiting after the first six hours.

Operations on Stomach—In sixteen stomach cases there was no need of ether and the patients made very nice recoveries. One case of perforated ulcer in which a gastroenterostomy, excision of ulcer and appendectomy were done, showed marked resistance to the anesthetic, was changed to a continuous mixture of ethylene, oxygen, ether, two ounces per hour, and went through the operation with fair relaxation, reacted in twenty minutes and vomited a small amount during the first twelve hours.

There was one splenectomy in this group. The blood pressure went up ten points in the first fifteen minutes and returned to normal, remaining steady throughout the operation. The

patient reacted readily and without being nauseated. He made an uneventful recovery.

Operations on Mastoid—Included in this group are twelve radical mastoid cases, ranging from six to seventy-four years of age. The induction period in these cases was two minutes, followed by a very quiet, even anesthesia, using fifteen per cent oxygen, ethylene eighty-five per cent. They reacted readily on the operating table. No vomiting. Recovery uneventful.

Operations on Frontal Sinus—One Killian operation (radical) was done on a very frail patient aged 34, who had parenchymatous nephritis. The operation lasted two hours and thirty-five minutes. Pulse, respiration and blood pressure remained very constant until the last half hour of the operation, when the pulse went up from 110 to 126 and the blood pressure began to fall. Both returned to the existing condition before operation after giving normal saline infusion. The patient reacted readily and made an uneventful recovery without vomiting or nausea.

Operations on Thyroid—The eight thyroidectomies were very satisfactory—quiet, even analgesia and slow, full pulse when we carried out from twenty to seventy-five per cent of oxygen and from eighty to twenty-five per cent ethylene in the mixture. They reacted readily and had no vomiting after the operation. Three vomited in the operating room while the bandages were being adjusted. There was no nausea after returning to bed. Premedication in each case had been one-sixth grain of heroin hypodermically one-half hour before operation. Very uneventful recovery.

Bone and Joint Operations—This group covers a large number of very frail, low tone patients from the age of two to sixty with extensive osteomyelitis, reduction of congenital hip, transplantation of nerves, reduction of fractures, etc., and long tedious operations that used to leave the patient in an exhausted or shocked state. This has been greatly reduced since we have used ethylene as they take their fluids readily and continue with their normal nourishment.

Choice of Anesthetic—Ethylene has been the anesthetic of choice in such cases as chronic bronchitis, pulmonary tuberculosis, nephritis, marked anemia, diabetes—any condition with a very fast heart rate—with very good results.

PROCEDURE OF ADMINISTRATION

Any gas-oxygen anesthetist can give ethylene by studying the difference between the two anesthetics. With this anesthetic we use no re-breathing. In abdominal cases, start the anesthetic with ten per cent oxygen and ninety per cent ethylene. The pupils dilate, then contract to the size of the pupil in the average ether anesthesia. This takes from two to five minutes and the average case runs on a mixture of ten per cent oxygen and ninety per cent ethylene or twelve per cent oxygen and eighty-eight per cent ethylene. The anesthesia is more even than with nitrous oxide and one can feed three breaths of 50 per cent oxygen and 50 per cent ethylene frequently without disturbing the anesthesia. If the patient tries to vomit at any time during the operation, flood with 100 per cent oxygen until he has had at least two breaths, then return to the normal mixture and in half a minute the anesthesia is as smooth as if nothing had occurred. Never try to stop vomiting by a heavier per centage of ethylene as it increases the difficulty and prolongs the disturbance. The patients have regular slow even respiration, slow pulse, color normal, or slightly flushed, skin dry and warm. Do not allow any cyanosis. Keep the air passages well open with an air way if necessary and increase oxygen to 15 per cent in the mixture if they will not stay clear. Where a large amount of premedication is used, more oxygen is indicated in the mixture. At the end of the operation give a few breaths of oxygen. They react easily and orient themselves readily. Some try to vomit as they are coming out. Others do vomit once or twice while reacting and not afterwards. In infants and children of this group we find that they take it much more easily and are in much better condition during and after taking ethylene than after taking nitrous oxide and oxygen or ether.

DANGERS

Ethylene is very inflammable and cannot be used in the presence of an open flame—cautery, high frequency current, loose joints, of any electrical apparatus as poor light fixtures, electric motors for bone work, electric fan, lighted cigarette, etc. It is easily ignited as it diffuses all through the air and will explode with a one per cent mixture of ethylene and air.

Referring back to the four important points of this paper as to ethylene as an anesthetic:

1. Its brief induction with no irritation to the air way, good ventilation, normal color, dry warm state of the patient, which has been true to the end of three hours of anesthesia, with the patient reacting readily with only slight nausea when he first awakened, with no disturbance of other functions as the lungs, kidneys, heart—seems to make it superior to ether for a wide range of cases.

2. In its administration it takes a similar apparatus to that used for nitrous oxygen and oxygen, with a more even and less transient anesthesia than nitrous oxide.

3. Though it has been used for a short time it has given a very good impression with its many good qualities. At the present time its safety cannot be judged until there is better control of such accidents as occur from it being very inflammable.

4. It clearly gives more relaxation without saturating the patient to as marked degree as is necessary with nitrous oxide and oxygen.

LAPAROHYSTEROTOMY IN THE EARLY MONTHS OF GESTATION

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Under ordinary circumstances, therapeutic abortion is performed by the vaginal route. The gravid uterus is emptied from below by methods varying according to the nature of the case, or the predilection of the operator. This practice is based on good obstetrics, for experience has shown that the pregnant uterus will stand much operative procedure and trauma, provided the peritoneal cavity be not opened, or its lining membrane, the peritoneum, be not too roughly handled. The poor results of Cesarean section, the country over, may be said to result from failure to appreciate the fact that while the uterus with an intact peritoneal covering will stand much abuse and resulting sepsis, no such immunity results from opening the abdomen and incising a uterus whose interior is septic or even potentially septic.

Occasionally, however, the obstetrician is confronted with the necessity of emptying the uterus to save or safeguard the life of the mother, who at the same time should be protected from future conception by sterilization.

It is perfectly possible, of course, first to empty the uterus and sterilize the patient later. Yet this means two operations, two periods of convalescence and additional expense. Where the condition of the patient warrants, the Cesarean section patient is always sterilized at that operation and not subsequently.

The following two cases illustrate how the uterus in the early, not the late months of gestation, may be emptied and the patient sterilized at the same operation. These cases are reported not as illustrating anything particularly new in the way of technic, but to emphasize a procedure not commonly followed at the present time.

ILLUSTRATIVE CASES

Mrs. G. W., Case No. 11,325, age 33, married, referred by Dr. A. E. Green of Lansing, entered the obstetric and gynecological clinic of the University Hospital April 12, 1920. At entrance she complained of backache, headache and swelling of the hands and feet.

She had been married nine years. During this period she had been pregnant five times, the first pregnancy occurring six years previously. Towards the end of this pregnancy she became edematous and had five convulsions before and one after the child was born. To save her life the doctor took the child. She was torn through into the rectum and had incontinence until the complete tear was repaired.

She was very toxic toward the end of her second pregnancy, which was terminated by extraction of the child before she had convulsions. Her third and fourth pregnancies ended normally. Last April, during the fifth month of her fifth pregnancy she became very edematous and short of breath. At the seventh month she had severe headaches and a little later became blind. She had eleven convulsions and was taken to this hospital and delivered.

Examination was quite negative. The patient was between four and five months pregnant, but there was no edema and the urine showed neither albumen nor sugar. The blood pressure, systolic 142, diastolic 90, was somewhat high for a woman of her years, but this was only significant and important in connection with her history.

Naturally the patient, because of her past rather terrible experiences, was quite alarmed and anxious that the present pregnancy be interrupted. After due consultation and careful consideration it was decided the patient's life would be seriously imperiled by allowering the pregnancy to continue and that it should be interrupted before and not after the appearance of toxic symptoms. Further, it was deemed advisable that the future be safeguarded by cornual resection of the oviducts, so that conception should be rendered impossible.

April 30, 1920, the pregnant uterus was exposed through a longitudinal suprapubic incision . The gravid uterus was delivered through the abdominal incision and packed about with gauze and a two and one-half inch incision made in the anterior uterine wall. The latter was incised carefully, so that the gestation sac was not opened, but was expressed intact by compression on the posterior uterine wall. The uterus firmly contracted after one cubic centimeter of pituitrin was injected into the uterine wall. All remnants of placenta were removed by the finger and a dull curette. Good drainage was secured by a moderate dilatation of the cervical canal by a hemostat introduced through the uterine wound. The latter was closed by a continuous layer of number one chromic catgut, the peritoneal edges being inverted by a continuous chromic gut Lembert suture.

The patient was then sterilized by cornual resection of the tubes, great care being taken that the peritoneal edges of the wedge shaped incisions were inverted by interrupted Lembert sutures. The cut ends of the tubes were buried beneath the peritoneum of the broad ligaments.

The patient had practically no vaginal bleeding, nor rise of temperature and was discharged after an uninterrupted convalescence.

CASE 2

The second case was similar to the first in many respects. It differed, however, in the very important particular that the patient was under our direct observation during her first two confinements, enabling us to determine the degree of toxemia present.

Mrs. G. M., case No. 18,139, aged 21, married, referred by Dr. C. S. Sackett, Charlotte, Michigan.

The patient was married in 1920 at the age of 17. She has had five pregnancies, only one of which went to full term. Two children are living, aged four and two years.

At the end of the first pregnancy she developed toxic symptoms which persisted in spite of treatment. She finally developed eclamptic convulsions and was delivered by forceps. She and her child made good recoveries.

Two years later she became toxic at the seventh month of her second pregnancy. She was in convulsions when she entered the maternity ward. This labor was forcibly terminated and both the child and the mother lived, although the latter had a postpartum pneumonia.

Following her discharge from the hospital, she had two induced abortions at about the third or fourth month, her physician fearing to allow the gestations to develop. Her last menstrual period was April 26, 1924, so that when she entered the University Hospital she was slightly under three months pregnant.

The pregnancy was interrupted and the patient sterilized for practically the same reasons detailed in the first case. The operative technic was the same except the incision in the uterine wall was slightly smaller, measuring only two instead of two and one-half inches. Since the operation, performed July 14, 1924, the patient has made an uninterrupted recovery and will be discharged from the hospital within the next few days.

DISCUSSION

1. Laparohysterotomy in the early months of gestation should be reserved for cases where it seems desirable not only to empty the uterus, but also to sterilize the patient.
2. It should not be employed for ordinary cases of therapeutic abortion, since it is much safer to empty the uterus from below.
3. The operation never should be performed in the presence of fever or other signs of sepsis.
4. It is contraindicated in organic disease, or where the patient is toxic and where a laparotomy might be the deciding factor in causing or hastening the death of the patient.

THE TREATMENT OF CHRONIC NEPHRITIS

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In this era of laboratory diagnosis, when in almost every Journal there is some article dealing with some new laboratory method, I have often wondered what the doctor in the field thought. One author says his method is the only one which will give information helpful to both doctor and patient; another author says the first writer is all wrong, that his method is the only one to use. Amidst all the conflicting opinions it might seem that the doctor's reaction would be to consign the whole crew of authors to the nether regions to squabble among themselves without being heard by the mass of men who are weary of polemics.

In recent years there has been an enormous amount of work done upon chronic nephritis and, naturally, a great number of articles have been published on the subject. No attempt will be made to review this huge literature. Certain points I shall refer to and then give the methods which seem to me to be of use to the practitioner in the field.

Our knowledge of kidney diseases has been materially advanced in recent years by the study of the chemistry of the urine and of the blood. What has been called the non-protein nitrogen of the blood has received a great amount of attention. It has been found, for example, that after the serum albumin and the serum globulin, the nitrogen protein, have been precipitated with alcohol, in the filtrate there are substances containing nitrogen which are not protein. Some of these are urea, uric acid, creatinin, and amino acids. The urea nitrogen composes the greatest part (usually about 85 per cent) and the non-protein nitrogen normally amounts to 25-40 mg. per 100 c.c. of blood. Studies of diseases in which the non-protein nitrogen has been increased, have lled to a much better understanding of the function of the kidneys and to better treatment of the individual patient.

The pendulum swings from one important substance to another. Several years ago creatinin held the stage as the most important non-protein nitrogen constituent of the blood. It was said by one hospital worker at a large meeting, that if a doctor were treating a case of nephritis and did not estimate the creatinin in the blood at intervals, he was neglecting his patient. Such a man is at one end of the scale where, at the other end, is the man who rarely examines the urine chemically. Both have the wrong attitude. Only recently doubt was thrown upon the whole subject of creatinin by a bio-chemist who did not think the substance called creatinin was really creatinin.

Recently, Major has proposed that we give a nephritic a certain amount (0.5 gm.) of creatinin intravenously and estimate the increase in the urine in hourly specimens up to three hours. Normals increase the output up to three times the pre-injection amount. In chronic nephritis the increase is none, to 50 per cent of normal.

Then uric acid held the stage for awhile. We were told that estimation of uric acid in the blood was the only valuable procedure to inform us of the functional capacity of the kidney. One does not hear so much about that now. The total non-protein nitrogen estimation, however, has held its own as a helpful procedure in diagnosis, prognosis, and treatment.

Addis conceives that the proper method of determining the amount of functioning tissue is to load it to capacity and then see how it will act. As urea is the most important salt eliminated by the kidney, he gives urea by mouth with large quantities of water to insure a kidney secretion and measures the ratio—urea in one hour's urine: urea in 100 c.c. of blood—and considers this a measure of the amount of secreting tissue in the kidney. His method is as follows:

At 6 a. m. the patient slowly drinks about 1000 c.c. of water in which urea is dissolved. When the blood urea concentration is between 15 and 25 mg. per 100 c.c., 30 gm. urea are given. If the blood concentration is already

as high as 60 mg. of urea per 100 c.c., no urea need be taken. At intermediate blood urea levels appropriate quantities of urea are administered, so that when the first blood is collected it should have a concentration of between 60 and 90 mg. of urea per 100 c.c. At 7 a. m., and every hour thereafter until 11 a. m., the patient drinks two glasses of water. No breakfast is given. Urine is voided every hour, but at 9 a. m., the time at which urination is completed is noted to within thirty seconds, and at 10 a. m., 11 a. m., and 12 noon urine is passed directly into special bottles and the exact time noted. The patient must be instructed to make each voiding as complete as possible, and to take the time at the end, and not at the beginning of urination. Blood is obtained (from a vein) at the middle of each of the three hourly periods over which the urine is collected. The urea content of these urine and blood specimens must be estimated with a high degree of accuracy, for even small errors may markedly influence the ratio if they happen to be in opposite directions for the blood and for the urine. The average ratio is 50.4. Probably Addis is correct in his idea of the best method of determining kidney function, but it is quite obvious that such a test is impossible outside of an unusually well equipped hospital. Even then we have found that errors and difficulties in urea estimation of urine are so great that we cannot be sure of our figures. Until the test is greatly simplified it has a very limited value.

There is no doubt that all this intensive work has assisted us to a far better understanding of nephritis and has thus helped us to treat our cases upon a more intelligent basis. For research upon the kidney diseases in hospitals and large clinics it is valuable. To the man in practice, who takes care of sick people in their homes or in small hospitals, such elaborate studies are neither feasible nor necessary. It is absurd to say that we do not handle our cases properly because we do not use this or that man's method. We can be absolutely sure of one thing, viz.: that all cases of nephritis under his care are not studied in such detail as he describes in his published articles. Only a limited number are so treated and when the paper is published only an occasional case may have all the known examinations and tests made. It cheers me up considerably to know that this is true. If I do not have all the tests I have read about performed on my patients, I do not feel that I am grossly neglecting them. After all, we must treat the patient who has the disease. Too often, in the zeal to find out new facts about the disease, we forget that we are dealing with a human being.

Chronic nephritis is a very common disease. Mortality statistics for this disease in the United States for the last 10 years are as follows:

	Number	Rate per 100,000	Per Cent
1910	53,330	99.	6.6
1911	57,803	97.5	6.9
1912	62,267	103.	7.4
1913	65,106	102.9	7.3
1914	67,545	102.4	7.5
1915	70,000	104.7	7.8
1916	75,316	105.2	7.5
1917	80,912	107.4	7.6
1918	79,343	96.9	5.4
1919	75,005	88.1	6.8
1920	78,192	89.4	6.8

Travelers from rice-eating countries tell us that chronic nephritis is rare among the natives, but found in the usual proportion among the meat-eating foreigners. Eskimos, we are told, suffer little from chronic nephritis in their native habitat. More proof is needed for these observations. Taking all information which we have (much of which is conflicting) there still remains the fact that there are some features in our modern civilization which predispose to the conditions which lead to nephritis. Newburgh has produced chronic kidney lesions in rabbits by feeding high-protein diets and he has fed large amounts of beef protein to normal men and has found albumin and blood in the urine.

It may well be that the saving of young lives as the result of lessened infant mortality, typhoid fever mortality, and other preventive measures, has increased the number of persons who reach the age when chronic nephritis begins to manifest itself. The chronic degenerative diseases are today engaging the attention which they really deserve.

In the etiology a few points seem to me to be most important. Hereditary influences certainly play some role. In fact, lacking the peculiarly susceptible tissue transmitted by heredity, it is doubtful if the kidneys would be so damaged by infection, protein sensitization and the like, or be the seat of the gradual inflammatory process known as primary contracted kidney. Focal infection, the all-embracing mother of all causes of nearly all diseases nowadays, must be held to be responsible in some cases. Unfortunately, shrines have been set up everywhere to the little god, "focal infection," and, like the Israelites before the Golden Calf at the sound of the trumpet, all fall down and worship. Never mind; soon we shall have another little god to worship as the ultimate cause of all diseases. Nevertheless, we must recognize the important role which strepticoccal throat infections play in the production of acute and chronic kidney lesions.

In order to treat patients in the best manner, there should be some classification of the nephritides. We must confess at the outset that there is no satisfactory classification. There have been many attempts, but without results satisfactory to both pathologists and clinicians. The kidney is an organ of somewhat complex

structure in which response to varying forms of irritation or local destruction produces different degrees of reaction. It is not so surprising that it is found impossible to file away the different clinical and pathological types into pigeonholes.

The old classification of chronic interstitial and chronic parenchymatous nephritis is still used and has some advantages from a clinical standpoint, but the pathologists now refuse to recognize any such terms. From their viewpoint they are quite correct. The lesions are not so simple. A useful classification proposed by Christian, of the chronic nephritides is:

1. Chronic nephritis.
   (a) With edema.
   (b) With vascular hypertension.
   (c) Mixed or combined type.
2. Essential vascular hypertension progressing to chronic nephritis.
3. Renal arteriosclerosis progressing into chronic nephritis.

It is not my conception that groups 2 and 3 give rise to chronic nephritis clinically. From the pathologists' standpoint lesions are found in the glomeruli, tubules, and interstitial tissue which may not be distinguishable from those in cases of what were in life chronic nephritis. For us, however, it makes little difference what the morbid histology of the kidney might be, provided the kidney is functionally capable of carrying on its work. That seems to me to be the criterion for us who treat the patients. I have seen many small scarred kidneys in cases of generalized arteriosclerosis, which were functionally competent by all tests. I have also seen somewhat enlarged, firm kidneys in cases of essential hypertension in which there was considerable histological change, but which, during life, were quite competent to carry on their proper function.

The simplest classification for our purpose, it seems to me, is into two groups: the wet and the dry. Or to take Christian's group and modify them a little:

1. With edema.
2. Without edema and with vascular hypertension.
3. A combination of 1 and 2.

This third group is by far the least common. In fact, one might almost say that such mixed types are unusual.

There has always been the question raised in how far the chronic nephritides are the result of infection. For the "wet" group it has generally been admitted that infections such as scarlet fever, measles, etc., play a very definite role. In the "dry" group it has been held by some that there is a primary contracted kidney without infection. Bell and Hartzel[1], after a careful study of glomerulonephritis, conclude categorically: "All forms of glomerulonephritis are due directly to bacterial invasion of the glomeruli, and the various clinical and pathologic types depend on the degree and extent of the permanent glomerular injury." They also consider that "The progressive nature of chronic glomerulonephritis is apparently due, in part, to repeatedly acute exacerbations."

If we accept the conclusion that all cases are the result of bacterial invasion—usually streptococcal—we are brought face to face with the now common theory of chronic focal infection. Like all theories it has been ruined by the overenthusiasm of its best friends. There can be no doubt that foci of infection in the body are directly responsible for some diseases, but it seems to me that we go to extremes when we ruthlessly tear out or cut out every conceivable organ which someone has said may be at fault, forgetting that many times we do our patients more harm than good. Many a patient has made the rounds of the specialties, in every one losing some part of his anatomy and some of his often very hard-earned cash, only to find that in the end he really is no better of his original disease.

I believe we should search diligently for any chronic infectious process which may have some relationship to the nephritis, let us say, but we should use judgment and prudence in advising removal of only suspicious conditions. Of the many infected tonsils, how few have nephritis? Of sinuses, of apical tooth abscesses, of gall bladder disease, etc., etc., how many have chronic nephritis? It is not the infection alone. There is a something which we have to call inherited constitution, which certainly plays an important part in determining the onset and course of a chronic nephritis.

To treat the chronic patient intelligently we should know much more about him, his environment, his habits—mental and physical, his heredity, his previous illnesses, than we usually do know.

The advances which have been made in recent years in the treatment of chronic nephritis have resulted from studies of the chemistry of the blood and of the ability of the kidneys to pass out certain dyes. Further interesting observations of great help in treatment have been the studies of the response of the kidneys to the food substances, salts and water which are brought to them for excretion.

Attempts to measure kidney function date back for a number of years, but Hedinger and Schlayer were among the first to study the problem systematically. They used a special diet and measured water output, nitrogen and salts. They also used substances intravenously, such as lactose, to test out the kidney function. Mosenthal modified their procedure, giving a fairly large meal containing protein, fat, carbohydrate, a weighed amount of sodium chloride, and 1750 c.c. of fluid to be divided and drunk only at meal time. He collected urine in two-

hourly specimens throughout the day and the 12-hour night period. For every specimen he measured the amount, specific gravity, NaCl and nitrogen. Inability of the kidney to concentrate salt and nitrogen, more or less fixation of specific gravity in the specimens and relation between intake and output were carefully noted. With this very elaborate and somewhat laborious series of procedures it was found that some kidneys showed rather striking and more or less uniform characteristics in the points noted above. It was impossible to study many cases so intensively and as time went on and more and more of us found that many patients, whose kidney function we wished to study could not eat the huge meal and, further, it seemed perfectly evident that some patients who were not in very good condition were actually harmed by so much protein as the diet contained. O'Hare also called attention to this feature in his work. He modified somewhat the test meal and used a method of added salt and urea with the two-hourly collection of urine during the day and 8 p. m. to 8 a. m. for the night. He gave 76 grams of protein, 127 grams of fat, 245 grams of carbohydrate, about 2,500 calories, 1,550 c.c. of fluids and 5.8 grams of salt. This is a big meal and many could not eat it. However, in thirty cases of chronic nephritis which he analyzed, water and salt seemed to obey the same laws of excretion, but water and nitrogen curves were not so closely parallel. The more severe the case the greater the lowered secretion of water, salt and nitrogen. Occasionally, in mild cases there was an apparent hypersensitiveness shown in the morning specimens. Fixation was to him the most important part of the test. He thinks the test is more delicate than the estimation of 'phthalein and non-protein nitrogen because in mild cases, when these are normal, the two-hourly test shows changes.

Mason later criticised the test meal technic, as it was too hard on the patient. He considered three important points:

1. Volume of night urine (this was emphasized by Mosenthal).
2. Variation in specific gravity throughout 24 hours.
3. Concentration of N in the night urine.

Lyle and Sharlit called attention to the extrarenal factors which influenced urinary output, such as temperature, humidity, psychic factors, and showed how, even in normal persons, night urine was at times greater than day urine.

An important criticism directed against all these methods is that they attempt to show response of the body to ingestion of protein and salt on the same day that the diet is given. In every study of metabolism it has been fundamental that the patient be on a standard diet for several days before, as well as during the experimental period in order to be able to draw any conclusions approaching validity.

Then, too, the methods were not altogether applicable away from well-equipped laboratories. Some method was needed which could be carried out by any intelligent patient and attendant and be interpreted without the aid of elaborate laboratory equipment. The two-hourly method had been demonstrated to be the most useful and informative; simplification was needed to make it widely useful.

One other test will be taken up before we discuss the question of handling the patient and of using the two-hourly test mentioned above. The functional test with phenolsulphonephthalein has been of great value. It fairly well parallels the urea and creatinin or non-protein nitrogen accumulation in the blood in that, as the 'phthalein is decreased in the two-hourly test, the non-protein nitrogen increases. This relationship is constant enough to be of practical value and can be used by the practitioner in place of the more complicated blood chemistry tests.

Certain features of the 'phthalein test are of importance. First, it must be performed exactly according to instructions. Exactly 1 c.c. must be given into the muscles at a point free from edema, the urine must be collected at exactly one hour and ten minutes, and two hours and ten minutes following the injection. Water must be given in order to assure a urinary output. Not only is the actual two-hourly amount of importance, but the relationship between the first and second hour output has significance. Thus, in a series of normal persons, the amount excreted during the first hour is 70 to 95 per cent of the total two-hour excretion. Not only, then, is decreased function shown by a diminution of the total output, but also by the lag in output, making the second hour amount nearly equal to, or even greater than, the first hour amount.

Further, it has been shown by many authors that a characteristic of the "wet" type of nephritis is an increase in the plasma sodium chlorid and that sodium chlorid retention has some relationship to the edema. On the contrary, there is no salt retention in the "dry" form.

Of the three kinds of foodstuffs, protein, fat, and carbohydrate, only protein is known to damage the kidney. This has been shown at the University of Michigan by Newburgh, who has produced chronic kidney lesions in rabbits by high protein diets. Also, Squier and Newburgh have produced marked kidney irritation in normal men by large meat diet. I have mentioned above that many who were using the test meals containing seventy or more grams of protein felt the patients were often harmed. There seems to be good evidence that protein,

and particularly certain of the amino acids, irritate the kidneys profoundly.

One further recent series of observations should be mentioned, which have to do with the source of the anemia so common to all cases of chronic nephritis of long standing. Brown and Roth, in a clinical study of this subject, call attention to the fact that chronic nephritis is a constitutional disease; that, although the etiology is unknown, the unknown agent causes a widespread vascular change in which the vessels of the bone marrow are naturally affected. Thus, the anemia is only one of the results of the disease, due to diminished hematopoiesis of bone marrow. They also remark that this anemia has a prognostic value. With these conclusions, I think we can agree.

What practical application can be made from the recent work in the treatment of the patients we see in practice?

First let us take up prognosis. It is important to know the family record of the patient, how many of his ancestors died of kidney disease, and at what ages. Also, is his physical build that of the parent (grandparent) who had nephritis, or of that of the other parent? In some families the cases of chronic nephritis have died comparatively young. In general, the younger the parents at death, the worse the prognosis in the patient. Prognosis is worse in a young man with a bad heredity and no previous infectious disease, than in a young man with a good heredity who has had his nephritis develop as the result of some definite infection. However, we may lay down some very excellent rules upon the basis of the past experience of others, but nothing can supplant that indefinable something which tells the careful observer of long experience how the individual case will run its course.

In treatment there are rational measures which follow directly from what has been said above.

Diet is most important. Persons who have chronic nephritis have, as a rule, a capricious appetite and they must often be tempted to eat. The underlying principles are a low protein, moderately high fat and carbohydrate diet, water freely. The diet must include all the vitamines; in fact, the anti-scorbutic vitamines in oranges, grapefruit and lemons are absolutely essential for the maintenance of the appetite, to say nothing of their specific action. In the dry form salt may be given to taste. In the wet form the so-called salt-free diet is best. This contains about 2 gms. of NaCl inherent in the foodstuffs. Practically, then, a diet of 40-50 gms. of protein, 100-150 gms. of fat, 200-250 gms. carbohydrates, with a caloric value of 1,800—2,200 will keep anyone in caloric balance. There is no rigidity about these amounts except so far as the protein is concerned. I do not feel that it makes the least bit of difference in what form the protein is given. The amino acid radicals are the kidney irritants and tyrosin and cystin seem to be especially irritating. Yet we must have tyrosin and cystin. Many stick to milk and its casein products for the proteins in the diet. There is no objection to this except the sameness. I am convinced that a varied diet is best for the patient.

After one has found out what the urine contains chemically and what the blood pressure is, and the degree of anemia, he now should follow the functional capacity of the kidneys. I can recommend several procedures which any practitioner can easily do. First is the test with the injection of phenolsulphopephthalein. A simple and satisfactory colorimeter can be obtained and the test can be made according to the instructions found on the colorimeter.

There are two important features about the test. First, the total amount excreted in two hours; second, the relationship between the amount excreted within the first and second hour.

Thus, in a series of normal persons from 25 to 38 years of age, in no case was there less than a 2:1 ratio and it ran from there to a 10:1. In other words, the normal individual puts out the greater part of the dye during the first hour. A marked change in this relationship is often the first sign of functional disturbance. I believe that an excretion of 25 per cent the first hour and 5 per cent the second hour has nothing like the significance that 15 per cent for each hour has. The former may be normal, the latter certainly is abnormal. Not only the amount excreted, but evidence of delayed excretion has particular meaning for him who knows how to read.

One test establishes only a base line for the individual patient. The real value of the test lies in the comparison of readings made at intervals. Rarely one finds kidneys which, although evidently quite diseased, are yet hypermeable. No set of rules can be applied to such a case. It must be judged by itself when all available information is at hand. Normally, specific gravity varies with amount of fluid drunk and character of food. Practically, then, a test for function supplementing the 'phthalein test can and should be done as follows:

The patient is on the standard salt-free diet, with a known amount of added salt (5 grams), and total fluids, 1700 c.c. divided and taken with meals at 7 a. m., 12 noon, and 5 p. m. He remains on this for at least three days in order that the body may accommodate itself to the diet. Now, while remaining on the diet and not in any way changing his mode of living, urine is collected at two-hourly intervals from 7 a. m., to 7 p. m., and in one amount from 7 p. m. to 7 a. m. For example, beginning at 7 a. m., April 15, the patient voids just before

breakfast. This specimen is discarded. At 9, 11 a. m., 1, 3, 5, 7 p. m., he voids into separate vessels and labels them. All urine voided after 7 p. m., and including the 7 a. m. voiding on April 16, is the night specimen. The specific gravity of every specimen is then taken, with urines at the same temperature, (in other words, do not take specific gravity of one specimen just as it comes from the warm body and of another specimen after it has stood several hours in a cold room). The total 12-hour day is then determined by adding all the 7 a. m. to 7 p. m. specimens. Now we have the total intake of fluid, the total output in two amounts day and night, and the specific gravity of all specimens day and night. This same procedure is repeated for periods of three consecutive days from time to time. Now, normally (leaving out of account extrarenal factors mentioned within) the total intake should be greater than the total output by 300-400 c.c. The separate specimens of day urine should show considerable variation in specific gravity; the night specimen should show 1.015-1.020 specific gravity and the day urine should be two or three times the quantity of the night urine. Gross departures from these standards show that the kidney function is impaired. For example, in severe chronic nephritis of the dry form the specific gravity of all specimens is fixed at a low figure (1.006-1.008) and the night urine equals or exceeds the day urine. Ingestion of fluid at meals, which should cause slight diuresis at the next two-hourly specimen, fails to do so. With the 'phthalein and the two-hourly urine one can gain all the information needed to carry on a case intelligently. It is not essential to take the blood urea or creatinin or other non-protein substances. There are occasions when it helps to know the blood urea, but the blood urea can be pretty accurately guessed if one has the patient before him and he knows the 'phthalein output and the results of the two-hourly tests.

Treatment by drugs? Yes, but this is the least important part of treatment. With diet, exercise, baths, massage, and sunlight, drugs, except to manage accessory symptoms, seem to me to be quite unnecessary. The only drugs I ever use are mild laxatives and occasional refrigerant diuretics. Whether one should use such powerful diuretics as diuretin or theocin is debatable and I have as yet no convictions on that point. My only conviction is that the fewer drugs one uses, the better off his patient is. The only drug which seems to be helpful is iron in some form. Osler was very fond of Basham's mixture. The preparation of bone marrow and spleen extract recently advocated by Leake should be useful in cases where anemia is present.

In the uremia of the dry form no procedure in my hands has been as valuable as venesection of 400-800 c.c. of blood. Convulsions usually cease and the patient often becomes conscious and may live for several weeks, long enough to settle any affairs he might have neglected to settle for the protection of his family. I do not believe I have ever seen a case recover sufficiently to live for several months when uremic convulsions set in. Venesection is palliative, not curative. Following venesection intravenous or subcutaneous saline solution should be given. Transfusion of whole blood may also be performed.

In the uremic coma of the wet form venesection may also be performed, but the results are not as satisfactory as in the convulsive type of uremia. Sweat baths are highly recommended by some. I confess that I have long since given up this procedure, as I do not believe that it helps. This is a personal opinion. I have had better results by placing large mustard plasters over the kidney regions on the back. We have had some success by forcing fluids up to four liters a day in some cases. We hope to report this in detail at some future date.

In conclusion, I would not have you gain the impression that I deprecate the more elaborate chemical work on the blood as means of obtaining valuable information. Such is not my belief. However, I am firmly convinced that by proceeding as I have briefly outlined above, patients will receive the benefits of modern methods applicable only to the patient in a well-equipped and well-manned hospital.

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The Official Program of the 104th (59) Annual Meeting of the Michigan State Medical Society, Mt. Clemens, Mich., September 9, 10 and 11, 1924

OFFICIAL CALL

The Michigan State Medical Society, the Council and the House of Delegates will convene in annual session in Mt. Clemens on September 9, 10 and 11, 1924, for the transaction of such business and scientific deliberation as may properly come before the Society and as provided by its Constitution and By-Laws.

J. B. Jackson, Chairman of the Council.
Guy L. Connor, President.
Attest: F. C. Warnshuis, Secretary.

THE COUNCIL

September 9 Meeting—12 m. and 5 p. m.
September 10 Meeting—12 m.
September 11 Meeting—12 m.
J. B. Jackson, Chairman.

SCHEDULE

September 9, 1924

12:00 m.—Meeting of the Council.
2:00 p. m.—House of Delegates.
7:15 p. m.—House of Delegates.
9:30 p. m.—Smoker.

September 10, 1924

8:00 a. m.—House of Delegates.
9:45 a. m.—First General Session.
1:15 p. m.—Section Meetings.
4:30 p. m.—Entertainment.
7:15 p. m.—Second General Session.
9:00 p. m.—President's Reception.

September 11, 1924

8:00 a. m.—House of Delegates.
9:00 a. m.—Section Meetings.
1:15 p. m.—General Meeting of all the Scientific Sections.

SECTION MEETINGS

Scientific Section Programs

Note:—Chairmen will convene their Sections promptly on the hour designated. Members are requested to co-operate and avoid delay.

Papers presented before Sections become the property of the State Society and cannot be published in other Journals.

Manuscripts are to be typewritten, double spaced and are to be handed to Section Secretaries.

GENERAL MEETING

Bijou Theatre

September 10, 1924—9:45 A. M.

Guy L. Connor, Detroit, President

1. Call to Order.
2. Invocation: Rev. D. H. Ramsdell, D.D., Methodist Church, Mount Clemens.
3. Address of Welcome—E. G. Folsom, M. D., President Macomb County Medical Society.
4. Response—President Connor.
5. Announcements:
   (a) Committee on Arrangements.
   (b) House of Delegates.
6. President's Annual Address—Guy L. Connor, Detroit.
7. Address—"Science and Superstition."
   Prof. W. D. Henderson, University of Michigan.
8. Nominations for President.
9. Resolutions.
10. Adjournment.

SECOND GENERAL SESSION

Bijou Theatre

TIME: September 10th, 7:15 P. M.

1. Call to Order by the President.
2. Music—Vocal Solo.
3. "Our Hospital Obligations" (15 minutes).
   Geo. L. FeFevre, President State Board of Registration.
4. Address—"The Profession's Relations to the Public."
   William D. Haggard, President-elect American Medical Association, Nashville, Tenn.
5. President's Annual Reception. Park Hotel.

THIRD GENERAL SESSION

Bijou Theatre

TIME: September 11th, 1:15 P. M.

1. Call to Order.
2. Report from House of Delegates.
3. Introduction of President-elect.

Scientific Program

(Note:—This afternoon's Session will be a Joint Meeting of all the Scientific Sections.)

4. "General Infections by Bacteria."
   Emanuel Libman, M. D., New York City.

Presentation of Clinical Cases.
Discussants:
L. H. Warfield, Ann Arbor—General Medicine.
R. R. Smith, Grand Rapids—Surgery.
Don Campbell, Detroit—Ophthalmology and Oto-Laryngology.
Reuben Petersen, Ann Arbor—Gynecology.
Guy L. Kiefer, Detroit—Public Health.

HOUSE OF DELEGATES

Methodist Church

Carl Moll, Speaker, Flint.
J. E. King, Vice-Speaker, Detroit.
F. C. Warnshuis, Secretary, Grand Rapids.

FIRST SESSION

TIME: September 9, 2:00 P. M.

CREDENTIAL COMMITTEE

Henry Cook—Flint.
V. H. Wolfson—Mt. Clemens.
A. V. Wenger—Grand Rapids.

1. Call to Order and Roll Call.
2. Speaker's Address—Carl F. Moll, Flint.
3. President's Remarks—Guy L. Connor, Detroit.
4. Appointment of Business Committee.
5. Election of Nominating Committee.
6. Report of Committee on Revision of the Constitution and By-Laws.
   Chairman—J. G. R. Manwaring, M. D., Flint.
7. Recess.

SECOND SESSION

TIME: September 9, 7:15 P. M.

1. Call to Order.
2. Annual Reports:
   (a) The Council—J. B. Jackson, Kalamazoo.
   (b) Committee on Tuberculosis—W. H. Marshall, Flint.
   (c) Public Health—C. C. Slemons, Grand Rapids.
   (d) Legislation—Hugh Stewart, Flint.
   (e) Venereal Prophylaxis—A. P. Biddle, Detroit.
   (f) Medical Education—B. D. Harrison, Detroit.
   (g) Civic and Industrial Relations—Guy L. Kiefer, Detroit.
   (h) Public Health Education—W. T. Dodge, Big Rapids.
   (i) Delegates to American Medical Association.
3. New Business and Resolutions.
4. Adjournment.

NOTE:—Nominating Committee Duties—
(a) Nominate four (4) Vice-Presidents.
(b) Nominate Councillor to succeed Dr. W. H. Parks, 13th District, term expires.
(c) Three delegates to American Medical Association and four alternates.
(d) Nominate place for next Annual Meeting.
(e) Custodians of the Ballot Box for President.

THIRD SESSION

TIME: September 10, 8:00 A. M.

1. Call to Order.
2. Reports of Business and Special Committees.
3. New Business.
4. Adjournment.

FOURTH SESSION

TIME: September 11, 8:00 A. M.

1. Call to Order.
2. Reports of Committees.
3. Report of Nominating Committee.
4. Unfinished Business.
5. Adjournment.

DELEGATES AND ALTERNATE DELEGATES
HOUSE OF DELEGATES

NOTE—The blackafce type that of the Delegates; the lightface type that of the alternates.

ALPENA—Branch No. 48

C. M. Williams, Alpena.
F. J. McDaniels, Alpena.

ANTRIM-CHARLEVOIX-EMMETT —Branch No. 41

B. H. Vanleuven, Petoskey.
Harry Shaver, Boyne City.

BARRY—Branch No. 26
BAY—Branch No. 4

E. C. Warren, Bay City.
P. R. Urmston, Bay City.
Mary Williams, Bay City.
C. A. Stewart, Bay City.

BENZIE—Branch No. 59
BERRIEN—Branch No. 50

Robert Henderson, Niles.
A. A. Rosenberry, Benton Harbor.

BRANCH—Branch No. 9
CALHOUN—Branch No. 1

C. S. Gorsline, Battle Creek.
Geo. A. Hafford, Albion.
E. L. Parmeter, Albion.
W. L. Godfrey, Battle Creek.

CASS—Branch No. 36
CHEBOYGAN—Branch No. 58
CHIPPEWA-LUCE-MACKINAW —Branch No. 35

C. J. Ennis, Sault Ste. Marie.
E. H. Webster, Sault Ste. Marie.

CLINTON—Branch No. 39

Eugene Hart, St. Johns.
E. A. McWilliams, Maple Rapids.

DELTA—Branch No. 38

G. C. Bartley, Escanaba.
A. F. Snyder, Escanaba.

DICKINSON-IRON—Branch No. 56
EATON—Branch No. 10

F. J. Knight, Charlotte.
V. J. Rickerd, Charlotte.

GENESEE——Branch No. 24

H. Stewart, Flint.
J. Benson, Flint.
H. Cook, Flint.
M. S. Knapp, Flint.
D. Knapp, Flint.
J. G. R. Manwaring, Flint.

GOGEBIC—Branch No. 52
GRAND TRAVERSE-LEELANAU— Branch No. 18

F. G. Swartz, Traverse City.
E. B. Minor, Traverse City.

GRATIOT-ISABELLA-CLARE —Branch No. 25

R. B. Smith, Alma.
C. F. DuBois, Alma.

HILLSDALE—Branch No. 3

T. H. E. Bell, Reading.
W. A. Oliver, Camden.

HOUGHTON—Branch No. 7

H. M. Joy, Calumet.
G. A. Conrad, Mohawk.

HURON—Branch No. 47

W. B. Holdship, Ubly.
A. J. Howell, Bay Port.
C. B. Morden, Bad Axe.
F. W. Wiley, Pigeon.

INGHAM—Branch No. 40

B. M. Davey, Lansing.
L. W. Toles, Lansing.
Oscar Bruegal, Lansing.
Fred Huntley, Lansing.

IONIA-MONTCALM—Branch No. 16
JACKSON—Branch No. 27

John Smith, Jackson
G. C. Hicks, Jackson

KALAMAZOO—Branch No. 64

L. J. Crum, Kalamazoo.
W. Denbleyker, Kalamazoo.
C. A. Youngs, Kalamazoo.
C. L. Bennett, Kalamazoo.
C. Gillette, Kalamazoo.
L. E. Westcott, Gobles.

KENT—Branch No. 49
LAPEER—Branch No. 23

W. J. Kay, Lapeer.

LENAWEE—Branch No. 51
MACOMB—Branch No. 48
MANISTEE—Branch No. 19

Harlan MacMullen, Manistee.

MARQUETTE-ALGER—Branch No. 28

A. W. Hornbogen, Marquette.
H. S. Smith, Ishpeming.

MASON—Branch No. 17
MECOSTA—Branch No. 8

W. T. Dodge, Big Rapids.
J. B. Campbell, Big Rapids.

MENOMINEE—Branch No. 55
MIDLAND—Branch No. 43

E. J. Dougher, Midland.
J. H. Sherk, Midland.

MONROE—Branch No. 15

C. T. Southworth, Monroe.
J. T. Siffer, Monroe.

MUSKEGON—Branch No. 61
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OAKLAND—Branch No. 3

D. G. Castell, Pontiac.
Fred Baker, Pontiac.

OCEANA

A. R. Hayton, Shelby.
J. H. Nicholson, Hart.

O. M. C. O. R. O.—Branch No. 11

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A. C. MacKinnon, Atlanta.

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ONTONAGON—Branch No. 66

E. J. Evans, Ontonagon.
F. W. McHugh, Ontonagon.
W. R. Hanna, Mass.
J. S. Nitterauer, Ontonagon.

OTTAWA—Branch No. 32

R. H. Nichols, Holland.
W. C. Kools, Holland.

PRESQUE ISLE—Branch No. 63
SAGINAW—Branch No. 14

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N. F. McClinton, Saginaw.

SANILAC—Branch No. 20

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John Campbell, Brown City.

SCHOOLCRAFT—Branch No. 57
SHIAWASSEE—Branch No. 33

G. B. Wade, Laingsburg.
W. E. Ward, Owosso.

ST. CLAIR—Branch No. 45

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W. L. Callery, Port Huron.

ST. JOSEPH—Branch No. 29
TRI—Branch No. 42

S. C. Moore, Cadillac.
W. J. Smith, Cadillac.

TUSCOLA—Branch No. 29
WASHTENAW—Branch No. 42

H. D. Barss, Ypsilanti.
A. D. Wickett, Ann Arbor.
W. E. Forsythe, Ann Arbor.
M. E. Soller, Milan.
A. A. Palmer, Chelsea.
I. W. Greene, Ann Arbor.

WAYNE—Branch No. 2

J. A. Kimzey, Detroit.
R. C. Moehlig, Detroit.
H. A. Luce, Detroit.
R. L. Clark, Detroit.
J. H. Charters, Detroit.
E. G. Martin, Detroit.
Wm. Honor, Detroit.
Frank A. Kelly, Detroit.
C. D. Aaron, Detroit.
R. C. Andries, Detroit.
G. E. Frothingham, Detroit.
Harold Wilson, Detroit.
F. R. Starkey, Detroit.
J. H. Dempster, Detroit.
E. W. Caster, Detroit.
Chas. Kuhn, Detroit.
John N. Bell, Detroit.
H. W. Pierce, Detroit.
F. T. F. Stephenson, Detroit.
H. C. Carstens, Detroit.
Harry F. Dibble, Detroit.
Geo. J. Reberdy, Detroit.
C. Hollister Judd, Detroit.
Wm. J. Cassidy, Detroit.
Willias A. Potter, Detroit.
W. B. Wallace, Detroit.
W. D. Barrett, Detroit.
F. G. Buesser, Detroit.
H. W. Yates, Detroit.
Chas. S. Kennedy, Detroit.
E. W. Mooney, Detroit.
John B. Rieger, Detroit.
Stuart Wilson, Detroit.
Frank C. Witter, Detroit.
Don A. Cohoe, Detroit.
H. B. Garner, Detroit.
J. A. McGarvah, Detroit.
A. D. McAlpine, Detroit.
W. P. Woodworth, Detroit.
A. E. Catherwood, Detroit.
A. E. Vogelin, Detroit.
B. C. Lockwood, Detroit.
Angus McLean, Detroit.
G. M. Livingston, Detroit.
H. W. Hewitt, Detroit.
Geo. K. Sipe, Detroit.
L. I. Condit, Detroit.
G. C. Chene, Detroit.

OPHTHALMOLOGY AND OTO-LARYNGOLOGY

Chairman—Wm. G. Bird, M. D., Flint.
Secretary—B. N. Colver, M. D., Battle Creek.

FIRST SESSION

BAPTIST CHURCH

September 9—9:00 A. M. to 12 M.

Dry Clinic, Harper Hospital, Detroit.

Under the direction of Dr. George E. Frothingham from twelve to fifteen selected cases will be presented by various men, giving the clinical history, the examination findings, the medical or surgical care, and indicating complications and end results, with the presentation of the patient.

The various men who attend the First Session will lunch in Detroit immediately at the conclusion of the Clinic. Following the lunch, the members and guests will go by motor to the Masonic Country Club, sixteen miles north of Detroit, and four miles south of Mt. Clemens.

SECOND SESSION

September 9—3 P. M. to 6 P. M.

Post-Graduate Lectures.
Masonic Country Club, Mt. Clemens, Michigan.

1. 3:00 to 3:40—"Etiology, Diagnosis and Management of Early Cataract."
Dr. Edward Jackson, Denver, Colo.

Synopsis: Our knowledge of the etiology of cataract is important, but fragmentary. Heredity, prenatal causes, poor general nutrition, trauma, eye strain, ocular inflammations, poisons and declining vitality of age, all share.

Diagnosis only begins with recognizing lens capacity. It includes exact kind, location, causation, the previous history of the eye, methods of eye work, the exact refraction, often changing at short intervals, the nutrition both general and ocular, the family history.

The management is just the opposite of telling the patient to wait for operation. Mostly operation never has to be considered. No patients need more regular and close supervision. Eyes must be watched for evidences of strain, inflammation and degenerative change. Quantity, kind, periods and conditions of eye work must be regulated. Glasses should be changed often enough to give the best possible help. Size of pupil must be controlled to give best vision. General health must be closely watched, especially intake of water, sugar tolerance and effects of focal infections. Patients must be seen and encouraged by evidence of retained vision: and if the case is progressive, familiarized with the thought of operation and the hope it offers of restored vision.

2. 3:45 to 4:25—"Demonstration of a New Portable Apparatus for Testing Air and Bone Conduction."
Dr. F. W. Kranz, Geneva, Ill.

Synopsis: Principal characteristics which may be investigated by physical measurements are the highest audible pitch, the lowest audible pitch, the minimum intensity for perception, the change in intensity or the change in pitch necessary for a discrimination in perception, the sensitivity of the ear as a function of pitch, and the minimum number of vibrations of any frequency necessary for the perception of a tone.

Until recent years, the tuning fork and the organ pipe have been the chief sources of tones available for experimental work, but the use of the vacuum tube electrical oscillator associated usually with a telephone receiver gives a source of sound unapproached by any other method in the possibilities of control of pitch and intensity.

Measurements of the absolute sensitivity of the ears of a number of presumably normal hearing people made with the use of a continuous tone range, showed in most cases, a considerable divergence between the sensitivities even of the two ears of a single individual. Changes in sensitivity with changes in pitch are very abrupt in some cases, one ear showing a change of 1000 in the necessary intensity for audition with a change in pitch of less than a semi-tone. An instrument for the production of continuous tones from about 200 to 500 cycles per second, and with a wide range of available intensities in definitely graded steps, has been produced.

3. 4:35 to 5:15—"Diagnosis of Disease of the Nasal Sinuses" with lantern illustrations.
Dr. J. A. Cavanaugh, Chicago, Ill.

Synopsis: Anatomy in Children and Adults. Diagnosis of the various forms of sinus infections. The role and importance of X-ray as an aid in making the diagnosis.

4. 5:20 to 6:00—"Major and Minor Neuralgias of the Head," with lantern illustrations.
Dr. John F. Barnhill, Indianapolis, Ind.

Synopsis: Methods of and points in the diagnosis and differentiation of the varieties of neuralgias.
A brief discussion of the possible causes.
The modern conception of the pathology.
Methods of treatments. Drugs.
Surgery and injection of the peripheral nerves.
Deep alcoholic injections.
The dangers and benefits of deep alcoholic injections.
Methods of injection. Choice of methods.
Surgery of the ganglion—cutting the posterior root.
The physiologic etirpation of the ganglion. Results.

SECTION DINNER—7:30 P. M.

Arrangements have been made for an informal Dinner at the Masonic Country Club. All members of the Section are urged to attend. This is an innovation in our Section, but we believe that it will be of great value from a social and recreational standpoint. The use of the golf course and of the bathing beach has been secured for those who wish to enjoy them. Any of the visiting ladies who wish to spend a part of either of the days of the meeting in Detroit, can get back and forth easily by interurban.

GENERAL MEETING, OPENING SESSION, WEDNESDAY, SEPTEMBER 10, 9:45 A. M.

BIJOU THEATRE

All members of the Section are urged to be present at the General Meetings. No Section work is planned for the forenoon. Details of the Session program are given under the General Meeting.

THIRD SESSION

September 10, 1:15 P. M. to 4:00 P. M.

Address of the President.
Report of Committees.
Naming of New Committees.
Election of Chairman, 1 year, Secretary for 2 years.
Round Table Discussion.

Under the direction of Dr. D. Emmett Welsh, Grand Rapids (Eye), and Dr. Charles H. Baker, Bay City, (Ear, Nose, Throat).

In accordance with the plan followed at the 1923 meeting at Grand Rapids, the discussion will be carried on so as to bring out as many practical points as possible, with the hope that the entire membership of the Section will enter into a lively, informal discussion. There will be no record kept for publication. The value of last year's experience meeting insures a good attendance and enthusiastic co-operation.

At this meeting opportunity will be given for the presentation of instruments and of pathological specimens.

General Meeting, Public Session ..... 7:15 P. M.

President's Reception ..... 9:00 P. M.

Details of these activities are given under the General Meeting.

FOURTH SESSION

Thursday, September 11, 9 A. M. to 12 M.

Election of Officers.

1. "Systemic Causes of Deafness."
   Don M. Campbell, M. D., Detroit.
   John Carter, M. D., Detroit.

   Synopsis: The Systemic cause of aural pathology is not as clearly recognized as it is in the case of ophthalmologic pathology.
   Of the various constitutional states tending to produce changes in the ear, syphilis is perhaps the most prominent.
   This has become so apparent that the detection or exclusion of syphilis in aural pathology has become a routine matter.
   Experience has shown that many cases of aural syphilis pass undetected, and also that the incidence of syphilis as an etiologic factor is so frequent as to make its consideration a matter of indispensable moment.

Discussant:
   Ferris N. Smith, M. D., Grand Rapids, Mich.

2. "Sinusitis a Reason for Apparent Failure Following Removal of Tonsils and Adenoids in Children."
   Dr. Roy A. Barlow, Madison, Wis.

   The existence of sinuses in children is not universally recognized. A review of the embryology discloses their presence even during fetal life, and the fact that they attain greater size in early childhood is demonstrated by the accompanying lantern slides.
   Young children are prone to infection which begins as a cold in the head. The existence of the infection is disguised by large tonsils and adenoids, especially since the symptoms are not referable to the sinuses themselves. The pathological condition is that of a low grade chronic infection. Removal of tonsils and adenoids accomplishes little toward the cure of the sinus disease and local medication is of no value.
   The diagnosis is made by the history and X-ray plates. Results of surgical treatment are very satisfactory.

Discussant:
   Dr. J. S. Wendel, Detroit.

3. "Diagnosis of Foreign Bodies in the Bronchi and Lungs in Infants and Children," with lantern slide demonstration.
   Dr. Russell S. Rowland, Detroit.

   Synopsis: The importance of the history, signs and symptoms as well as Roentgen Ray and endoscopic examination. Pathology; physical signs; newer development in Roentgen Ray examinations. The importance of early diagnosis in the treatment of these conditions.

Discussant:
   R. Bishop Canfield, M. D., Ann Arbor, Mich.

4. "Problems in Laryngology."
   Dr. A. C. Furstenberg, Ann Arbor.

Discussant:

5. "Irremovable Foreign Bodies in the Eye."
   Dr. Geo. Slocum, Ann Arbor.

   Synopsis: Without surgical intervention foreign bodies in the eye are among the most serious of ocular injuries.
   Symptoms and diagnosis of foreign bodies:
   1. Presence.
   2. Location.
   3. Extent of laceration.
   4. Size of foreign body.
   5. Accompanying reaction.

   Classification:
   I—Removable.
   1. Those situated in the aqueous chamber and generally removable.
   2. Those situated wholly within the lens.
   3. Those situated in the vitreous and generally removable because magnetic.
      (a) Seat of injury serious or laceration extensive.
      (b) Laceration moderate or slight, recent or late.
      (c) Removable but marked iridocyclitis already present.

   II.—Irremovable.
   1. Prognosis as to injured eye.
   2. Management of different types.
      (a) Non-magnetic.
      (b) Those too large to remove without destructive laceration.
      (c) Those enclosed in organized tissue.
      (d) Seat of injury in the ciliary zone.
      (e) Character of reaction not admitting of removal.
   3. General principles of treatment of each type.

Discussant:
   Dr. Edward Jackson, Denver Colo, (By invitation.)

GENERAL MEETING
CO-JOINT SECTION SESSION
BIJOU THEATRE

Thursday, Sept. 11, 1:15 to 4:30 P. M.

"General Infections by Bacteria."
Dr. Emanuel Libman, New York City.

Discussants:
1. Dr. S. H. Warfield, (General Medicine.)
2. Dr. Richard Smith, (Surgery.)
3. Dr. Reuben Petersen, (Gynecology and Obstetrics.)
4. Dr. Don Campbell, (Ophthalmology and Oto-Laryngology.)
5. To be announced. (Pediatrics.)
6. Dr. Guy Kiefer, (Public Health.)

SECTION ON SURGERY

Chairman—Henry J. Vandenberg, Gd. Rapids.
Secretary—A. C. Blakeley, Flint.

FIRST SESSION

PRESBYTERIAN CHURCH

September 10, 1924—1:15 P. M.

Chairman's Address.
Henry J. Vanden Berg, Grand Rapids.

1:30 p. m.

"Roentgen Ray Treatment of Thyrotoxicosis, with Report of Cases."
Dr. C. D. Chapell, Flint, Mich.

A comparison of fifty cases treated by X-ray, some of which have been treated surgically and some medically, others by the Roentgen Ray.

Discussants:
Dr. L. R. Himelberger, Flint, Mich.
Dr. Hickey, Ann Arbor, Mich.
Dr. Louis M. Warfield, Ann Arbor, Mich.
Dr. Richard R. Smith, Grand Rapids, Mich.

2:00 p. m.

"Studies in the Technique and Clinical Application of Sex Gland Transplantation."
Dr. Max Thorek, Chicago, Ill.

Discussants:
Dr. A. W. Hornbogen, Marquette, Mich.

Dr. A. F. Jennings, Detroit, Mich.
Dr. T. A. McGraw, Detroit, Mich.

2:30 p. m.

"Treatment of Cancer of the Large Intestine."
Dr. Walter E. Sistrunk, Rochester, Minn.

Discussants:

Dr. Max Ballin, Detroit, Mich.
Dr. John N. Bell, Detroit, Mich.
Dr. Louis J. Hirschman, Detroit, Mich.

GENERAL MEETING, OPENING SESSION, WEDNESDAY, SEPTEMBER 10, 9:45 A. M.

BIJOU THEATRE

All members of the Section are urged to be present at the General Meetings. No Section work is planned for the forenoon. Details of the Session program are given under the General Meeting.

SECOND SESSION

September 11th—9:00 A. M.

Election of Chairman.

"Sterilization in the Feeble-Minded."
Dr. H. E. Randall, Flint, Mich.

Discussants:

Dr. C. D. Camp, Ann Arbor, Mich.
Dr. G. F. Inch, Kalamazoo, Mich.

9:30 a. m.

"Hematogenous Staphylococcus Infections of Various Organs Arising from Infected Foci in the Skin."
Dr. D. B. Phemister, Chicago, Ill.

Synopsis: The most important normal habitat of the staphylococcus is the skin. It is present in most skin infections. Hemotogenous infections in various organs and of varying degrees of severity arise from its entrance into the blood stream from the skin lesion. The relationship between the skin lesion and that in a distant organ or part is frequently overlooked. The establishment of a history of a preceding cutaneous infection is of assistance in the diagnosis of staphylococcus infections of various parts of the body.

Discussants:

Dr. Udo J. Wile, Ann Arbor, Mich.
Dr. Charles C. Jennings, Detroit, Mich.

10:00 a. m.

"Etiology and Prevention of So-Called Catheter Cystitis."
Hugh Cabot, Ann Arbor, Mich.

Discussants:

Dr. H. W. Plaggemeyer, Detroit, Mich.
Dr. W. F. Martin, Battle Creek, Mich.

10:30 a. m.

"The Surgical Treatment of Angina Pectoris."
Dr. Walter Vaughan, Detroit, Mich.

Discussants:

Dr. De Haas, Detroit, Mich.
Dr. J. G. R. Manwaring, Flint, Mich.
Dr. H. F. Collier, Ann Arbor, Mich.

11:00 a. m.

"The Drive of Civilization, Disease and Decadence."
Jos. Rilus Eastman, Indianapolis, Ind.

Discussants:

Dr. A. W. Crane, Kalamazoo, Mich.
Dr. W. T. Dodge, Big Rapids, Mich.
Dr. J. H. Kellogg, Battle Creek, Mich.

GENERAL MEETING CO-JOINT SECTION SESSION

BIJOU THEATRE

Thursday, Sept. 11, 1:15 to 4:30 P. M.

"General Infections by Bacteria."
Dr. Emanuel Libman, New York City.

Discussants:

1. Dr. S. H. Warfield, (General Medicine.)
2. Dr. Richard Smith, (Surgery.)
3. Dr. Reuben Petersen, (Gynecology and Obstetrics.)
4. Dr. Don Campbell, (Ophthalmology and Oto-Laryngology.)
5. To be announced. (Pediatrics.)
6. Dr. Guy Kiefer, (Public Health.)

GENERAL MEDICINE

GERMAN EVANGELICAL CHURCH

Chairman—Bruce C. Lockwood, Detroit.
Secretary—Frank J. Sladen, Detroit.

September 10th—1:15 P. M.

1. Chairman's Address.
   "Thoughts on the Modern Methods of Diagnosis and Treatment of Digestive Diseases."
   B. C. Lockwood, Detroit, Mich.
2. Subject to be announced.
   E. L. Eggleston, Battle Creek, Mich.
3. "Lead Poisoning."
   Douglas Donald, Detroit, Mich.
4. "Syphilis of the Lung."
   C. F. Karshner, Grand Rapids, Mich.
5. "Resuscitation from Electrical Shock."
   W. L. Finton, Jackson, Mich.
6. "Sympathectomy for Angina Pectoris."
   A. F. Jennings, Detroit, Mich.
7. Subject to be announced.
   Emanuel Libman, New York City.

September 11th—9:00 A. M.

8. "Digitalis, Its Uses and Abuses."
   John L. Chester, Detroit, Mich.
9. "Hypothyroidism and Its Relationship to Chloratic Anaemia."
   L. M. Warfield and I. W. Greene, Ann Arbor.
10. "Chronic Alkalosis."
    F. J. Sladen, Detroit, Mich.
11. "Clinical Significance of Jaundice."
    M. A. Blankenhorn, Cleveland, Ohio.
12. "Hemolytic Jaundice."
    C. D. Aaron, Detroit, Mich.
13. Subject to be announced.
    A. W. Crane, Kalamazoo, Mich.

GYNECOLOGY AND OBSTETRICS

Chairman—Walter Manton, Detroit.
Secretary—A. E. Catherwood, Detroit.

METHODIST CHURCH

FIRST SESSION

September 10—1:15 P. M.

1. "Cancer of the Cervix. Treated with Heat and 'Starvation Ligature.'"
   G. VanAmber Brown, Detroit, Mich.

   Synopsis: Carcinoma is more vulnerable to the application of heat than to any other known agent. The use of low degrees of heat is particularly applicable to the treatment of Carcinoma of the Cervix. The value of the heat treatment is enhanced by combining it with the "Starvation ligature." This is especially indicated in the so-called inoperable and incurable cases of cancer of the uterus.

2. "Further Study of the Use of the Phloridzin Test in the Early Diagnosis of Pregnancy."
L. W. Hayes, Detroit, Mich.

Synopsis: A discussion of the different results obtained by different workers with this test. The importance of a definite technique, and a summary of fifty cases.

3. Subject to be announced later.
Miles F. Porter, Jr., Detroit, Mich.

General Meeting, Public Session ..... 7:15 P. M.
President's Reception ..... 9:00 P. M.

Details of these activities are given under the General Meeting.

SECOND SESSION

Election of Chairman.

September 11th—9:00 A. M.

1. "The Bony Pelves of American Colored Women."
R. W. Alles, Detroit, Mich.

Synopsis: The comparison of the measurements of such pelves with those of the average white woman.
The potential insufficiency of such pelves during childbirth.

2. "Some Problems in Gynoplastic Surgery."
Alexander M. Campbell, Grand Rapids, Mich.

Synopsis: There is a need of a more intimate knowledge of the anatomy of the pelvic fascia and the muscles of the pelvic floor. Demonstration of a dissected female pelvis. Surgical management of Cystocele and Rectocele. Lantern slides demonstration.

3. "The Management of Second Stage of Labor."
Robert B. Kennedy, Detroit, Mich.

Synopsis: The diagnosis of beginning of second stage. Indications for operative proceedings. Indications for forceps. Application of forceps and advantages of the different types. "Prophylactic Forceps." Indications for episiotony and method of repair. Lantern slides demonstration.

PUBLIC HEALTH

Basement Baptist Church

Chairman—W. DeKleine, Saginaw.
Secretary—R. C. Stephenson, Flint.

FIRST SESSION

September 10th—1:15 P. M.

Dr. Abraham Zingher, Assistant Director, Research Laboratory, New York City Department of Health, and Assistant Professor of Hygiene, New York University and Bellevue Hospital Medical College, will give a two-hour illustrated, informal lecture-clinic on

"The Control and Prevention of Scarlet Fever and Diphtheria, including the Practical Demonstration of Dick and Schick Tests on School Children."

This clinic is of special importance to physicians, since an antitoxin for scarlet fever will soon be on the market.

SECOND SESSION

Election of Chairman.

September 11th—9:00 A. M.

1. Chairman's Address: "The Health Officer's Objective."
William DeKleine, Saginaw, Mich.
2. "Trend of Health Education Among School Children."
Mary Chayer, R. N., Saginaw, Mich.
3. "A Method for the Prevention of Communicable Diseases Among School Children."
R. C. McHaney, Owosso, Mich.
4. "The Practical Application of Mental Hygiene."
A. Adams Jacoby, Detroit, Mich.

PEDIATRICS

Basement Presbyterian Church

Chairman—F. J. Larned, Grand Rapids.
Secretary—R. M. Kempton, Saginaw.

FIRST SESSION

September 10—1:15 P. M.

1. "Infantile Tetany with Report of Case."
Edwin P. Russell, Ann Arbor, Mich.
2. "Adolescent Rickets with Report of Case."
David J. Levy, Detroit, Mich.
3. "Human Milk: Factors Which Affect Its Production."
B. Raymond Hoobler, Detroit, Mich.
4. "The Value of Quartz Light Therapy in Pediatrics."
J. P. Parsons, Ann Arbor, Mich.
5. "Remarks on Infant Feeding."
Walter H. O. Hoffman, Chicago, Ill.

SECOND SESSION

Election of Chairman.

September 11—9:00 A. M.

1. Intra-Cranial Hemorrhage in the New-Born."
T. D. Gordon, Grand Rapids, Mich.
2. "Treatment of Pneumonia."
Russell S. Rowland, Detroit, Mich.
3. "Some X-Ray Studies in Rickets."
Preston M. Hickey, Ann Arbor, Mich.
4. "Dental Problems of Childhood from the Pediatric's Standpoint."
Lafon Jones, Flint, Mich.
(a) Discussion opened by Dr. Russell Bunting, Dental College, University of Michigan.
(b) Discussion continued by Dr. J. Orton Goodsell, Saginaw, Mich.
5. "Pulmonary Tuberculosis in Childhood."
Albert J. Bell, Cincinnati, Ohio.
6. Businness Session and Election of Chairman.

REGISTRATION

The Regsitration Booth will be found in the Gymnasium. Every member is urged to register shortly after his arrival and receive a copy of the official program, badge, and entertainment announcements. Members will find the commercial exhibits also located in the Gymnasium.

INFORMATION

The House of Delegates will meet in the Methodist Church, next to the Gymnasium. Section Meetings will convene in the Churches noted at the head of each Section's program.

The General Meetings and the Combined Section Meeting on Thursday afternoon will be held in the Bijou Theatre.

Every member is requested to register at the Registration Booth in the Gymnasium.

A splendid assortment of exhibits will be found in the Gymnasium.

Delegates' credentials have been mailed to each Delegate. They are to be presented to the Credential Committee in the House of Delegates and not at the Registration Booth.

General Meetings and all Section Meetings will be started promptly at the time designated. Please remember this and be prompt in your arrival at meeting places.

The Journal
OF THE
Michigan State Medical Society
ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

PUBLICATION COMMITTEE
R. C. Stone, Chairman.....Battle Creek
B. R. Corbus.....Grand Rapids
J. D. Bruce.....Saginaw

Editor and Business Manager
FREDERICK C. WARNSHUIS, M. D., D. Sc., F. A. C. S.
Grand Rapids, Mich.

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The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

Subscription Price—$5 per year, in advance

SEPTEMBER, 1924

Report Malpractice Threats Immediately to Doctor F. B. Tibbals, 1212 Kresge Building, Detroit, Michigan.

Editorials

OUR ANNUAL MEETING

In this issue there will be found the completed program for our Annual Meeting in Mount Clemens on September 9, 10 and 11. We urge every member to read this program. Having done so, we feel certain you will want to attend this meeting. Therefore we recommend that you commence formulating your plans and arrange your engagements so as to participate in the activities of this meeting.

To Delegates: You are the official representatives of the members of your County Society. You constitute the legislative body of our Society. To you there is entrusted the formulation of the policies and activities of our State organization. This is not an idle responsibility or an empty honor. Especially is this true this year when a new Constitution and By-laws are to be acted upon. Your local members rightly expect that you will attend all the sessions of the House of Delegates. It is extremely important that you be present at the first meeting, September 9, at 2 p. m.

Invited Guests—Among the several invited guests who will be present we call especial attention to our good fortune in being able to secure Dr. W. D. Haggard of Nashville, Tenn., President-elect of the American Medical Association. Dr. Haggard will address us at the General Meeting on Wednesday evening, September 10. His subject will be, "The Profession's Relation to the Public." Dr. Haggard is an able speaker, a man of exceptional personality and a keen student. His address will be the outstanding feature of our meeting.

Combined Sectional Meetings—On Thursday afternoon at 1:15 p. m., the six Scientific Sections will hold a combined meeting in the Bijou Theater. The able clinician from New York will give a clinical lecture and demonstration. The selected representative of each Section will participate in the demonstration and discussion. We are certain that this combined meeting will prove to be most profitable and interesting. The theater seats 1,000 persons. It should be taxed to its capacity.

Entertainment—Macomb County physicians have planned pleasing entertainment for you during the leisure hours. A smoker, a reception and a "Flying Circus" on Selfridge Flying Field are the headliners.

Again we urge that you plan to be in attendance. It is a meeting that you can ill afford to miss. Attendance will redound to the benefit of yourself and of your patients.

IMPOSING INSURANCE COMPANIES

Practically every physician receives from one to a dozen letters each year from a life insurance company or its medical department that reads:

"John Doe has made application for life insurance. He reports that you attended him during an illness in 1923, (or that you operated on him). Will you please send me a complete report of that illness (or operation) in order that he may be issued a policy."

Not a "thank you," or "we will pay" in any of these requests. Just a brazen, imposing request that is made of the attending physician or surgeon. Why tolerate it, or why let them get away with it? Our customary procedure is to consign such request to the waste basket. We recommend that every member do likewise. Why?

First, because you are being imposed upon. The company is endeavoring to secure information on a prospective policy risk free. It wants to secure this information in order to determine whether the applicant is a safe risk. It wants to avoid financial loss and wants your services as an assistant appraiser free of charge. The company desires to take advantage of your information and opinion for its personal gain without paying for such knowledge or advice. That's why it is an imposition on you, Doctor.

So long as you fall for this type of grafting, just so long will they continue to impose upon you and laugh up their sleeves at "Easy Mark

Doctors." Our experience has been that when they really desire this information they will pay for it when pay is demanded, and that the applicant will not be denied insurance because you do not comply with their imposing request. Terminate today compliance with requests for services and opinions from insurance companies unless you receive payment for the services you render. Cease being an "easy mark."

THE PROBLEM OF MENTAL INFERIORITY

The spirit of modern medicine is the spirit of scientific investigation and its purpose is service to humanity. Therefore no material facts proffered by fellow workmen, of utility to promote welfare of mankind, can be rejected without careful examination.

Dr. Thomas Salmon, in his address at the opening session of the College of Physicians and Surgeons, Columbia University (Columbia University Press, 1924), points out that "Few physicians are aware that one person in ten in this state (New York) is admitted to a mental hospital before he dies, or that the number of beds in public hospitals for the insane in this country equals those occupied by all other sick persons combined." But "even the names and chief characteristics of its most common forms are less well known to many well educated physicians than are those of rare tropical diseases." "Public opinion and the law recognize mental disease as a medical problem and almost invariably the physician is first appealed to when it appears in a family, but he is usually not only quick to admit his lack of information regarding the questions of prognosis and treatment about which the distressed family of the patient are anxiously inquiring, but will often acknowledge to a colleague his profound lack of interest in everything that pertains to them."

Mental states constitute a medical problem, having many points of contact with those occupying the attention of the general physician. Ideas not only determine the actions of the body as a whole, as expressed in social conduct; ideas also influence the activities of individual organs and these states called, psychoneurosis by physicians and 'nervousness,' 'neurasthenia,' etc., by the laity, are far too wide-spread and their possessors make far too insistent demands from the general medical profession to permit them to be ignored as insanity has been. Recently Dr. William J. Mayo (quoted by Salmon), said, "Neurasthenia, psychasthenia, hysteria and allied neurosis are the causes of more human misery than tuberculosis or cancer. It is easy to see why scientific medicine finds itself confronted by a dilemma in having to deal with such a great mass of illness as that constituted by the psychoneuroses and at the same time to preserve its aloofness toward all problems of mind in relation to disease. Several compromises have resulted. By one of these compromises the disorder is forcibly transformed into one of the fairly well understood forms of physical disease, and the mental symptoms considered as incidental and relegated to the background. Just what form of physical disease the psychoneurosis is transformed into depends upon the direction of medical interest at the time. Uterine displacements, impacted molars and endocrine disorders have all served their turn. In this transformation, the patients' anxiety regarding their general health and the frequency with which their compulsive thinking fixes their attention upon the functioning of their organs help materially. The physician is enabled to ignore the fact that the bodily symptoms so dramatically presented are mostly symbolic and is at liberty to treat them as if they were real. A colleague told me once that he curretted an old lady who had the delusion that she was pregnant, hoping thus to rid her mind of something she thought was in her uterus. This is an extreme example, perhaps, but the most amazing situations develop every day as the result of the general medical acceptance of physical life as the most convenient field of battle in dealing with the psychoneurosis. Two factors bid fair soon to dispose of this compromise, without the necessity of any deeper medical interest in mind than exists at present. One is the fact that hosts of quacks are prepared to conduct proceedings at this level much more successfully than the physicians. These competitors of ours are not greatly troubled by qualms of conscience, for forcing facts to meet situations in their daily task. Besides, they have not the underlying impatience with the psychoneurotic and his difficulties that handicaps the physician and, despite his efforts to conceal it, frequently interferes with professional relations. Remunerative patients with functional disorders are just as welcome to the quack as those with organic ones—perhaps more so. The other factor that must effectually modify the prevailing medical attitude toward the psychoneurotic and his woes is the element of time. The increasing shortage of physicians and increasing pressure upon scientifically trained practitioners will some day convince the profession generally of the tremendous economic waste involved in permitting itself to become a subsidized audience for the great dramatization of disease that the psychoneurosis constitute."

One of the reasons why scientific medicine chooses to ignore at the present time those nervous disorders is due to the decline of scientific interest in function not related to structure. No more brilliant chapter exists in medicine than that which records the work that provided our present knowledge of the

brain and spinal cord localization, but the emotions associated with instinctive activities and our knowledge of functions grouped under the concept of intelligence remain practically unchanged. A patient comes to us with a morbid fear. For all practical purposes it is the most important thing in his life. It profoundly acts on his relations, physiological, family and social. It may result in his death, by suicide, as surely as carcinoma could. We must regard that feat as a medical fact, although we are utterly unable in the present state of knowledge to correlate it with any structural change in any organ or system of organs and we cannot explain its existence as anatomical, physiological or biochemical terms. But another branch of investigation, psychopathology throws light upon the origin of that fear. It also provides means for its management so that it can be effectively and permanently removed. This would seem to be a creditable medical achievement, but, notwithstanding the fact that the patient came to the physician for aid, scientific medicine today seems coldly aloof from everything connected with it. "If it is unscientific or non-medical to employ suggestion, mental analysis, education in the psychology of the emotions, or social readjustment in treating these cases then this field must be formally abandoned by trained, scientific physicians or the medical profession, with blind dogmatism, continue to insist upon their forcing psychological issues into physiological ones, regardless of the facts."

Of course, it must be remembered that hundreds of individual physicians, and some of them the greatest leaders in the medical profession, are intensely interested in the neuro-biological aspects of medicine. The discovery of regulating mechanisms that enable systems of organs to act in harmony with other systems shows that the minute study of a single organ is inadequate to explain even its own functions, much less the part it plays in the life of the organism as a whole. The broad neuro-biological attitude that Sherrington expresses in his book on the "Integrity of the Nervous System" and the work of Pavlov, Cannon and others who show the demonstrable effects of ideas on the functions of organs, will perhaps level the barrier which now seems to exist between physicians and the study of the psychoneurosis.

It is not difficult to understand how this barrier arose. The brilliant discoveries in cellular pathology focused attention on structural change, the ruins left by the fire; gradually the laboratory and the test tube replaced the careful study of the symptoms of disease, the study of functional disability.

The doctor of another generation was the intimate friend, the confident of the hopes and fears of his patient. This relationship seems to have passed, not by force of circumstances, but more likely because the public realized the changed attitude of the physician.

A new era in medical education will train physicians to make practical use of the scientific studies in neuro-biology and to treat the patient as a living, thinking human being.

C. D. Camp.

THE JOURNAL

The demands of our individual practices consume the majority of our time. We forget information that has been imparted. We are inclined to give but little heed to the activities of our Medical Societies. We are lax in our support and prefer to "Let George Do It."

Sooner or later an occasion arises wherein our individual interests become involved. We jerk up with a start and wonder what has been going on. We rake our memories in vain and interrogate as to why this or that has happened. We promptly make the inquiry as to why this incident has not been provided against and learn to our surprise that definite steps and action has been taken, only we passed it by in our period of indifference. The same is true as to our attitude to The Journal. We may read it, possibly a hasty glance, or we may simply toss it on the accumulating pile of Journals in our office. We miss each month many important papers, reports and records of organizational activity. Then we wonder as to what value is The Journal.

To refresh your memory, to bring you back to things present, to possibly create a reawakening, we believe it timely to once more supply you with some pertinent facts.

1. The Journal is issued monthly and every member not in arrears is entitled to receive a copy of each issue.
2. The Journal expense is defrayed by the $2.00 it receives from your annual dues and the revenue derived from its advertising pages.
3. The editorial policy is formulated and supervised by the Council through it's Publication Committee and applied by the Editor.
4. Original articles are obtained from essayists who appear on the Annual Meeting program and from contributions that are approved and accepted by the Publication Committee.
5. Case reports, comments, editorials correspondence and news items are solicited from our members, the purpose being to provide an open forum for all our members, a forum which the Council and Editor urge our members to avail themselves of.
6. In so far as possible the Editor endeavors to keep the members enlightened and informed upon medical progress and events.
7. State policies are announced and support is solicited as occasions and events jus-

tify or render imperative organizational and co-operative activity.

8. Local and District Society Meetings and achievements are reported for the sake of record and to inspire all sister societies which comprise our State organization.

The foregoing is the policy, object, activity and function of your Journal. The Council, Publication Committee and Editor cannot attain these ends, in their fullest measure, single handed. The combined membership assistance is requisite. To that end is your co-operation, interest and loyalty solicited. Will you not contribute this assistance? Cause the Journal to be *your* Journal and contribute to it your support.

UNREASONABLE TAXATION

Through methods characteristic of conniving politicians an enactment, rider, joker, or whatever else you may please to call it, was passed by the last legislature that requires incorporate organizations not incorporated for profit to file a tri-annual report with the Secretary of State. For the privilege of doing so you pay a fee of $10.00 and a filing fee of $2.00.

Under this requirement, Literary Societies, Clubs, Debating Societies, Camera Clubs, County Medical Societies, etc., not incorporated for profit, must make returns and pay the tax of $12.00. If your County Society is incorporated it is incumbent for you to make a return.

Words are not printable to give impression or opinion of such legislation or proponent of such an endeavor to cause to be paid into the State treasury added dollars for politicians to spend and play with. It is just such exhibitions of tax impositions that will terminate in a state-wide house cleaning. May it start at the coming primmaries and fall election. Get busy, Doctor, and down the perpetual candidate who has been misrepresenting you.

LEGISLATION

There is no question but what representatives of cult practices are aggressively engaged in building political fences for the purpose of enlisting support for legislative enactments that they intend asking for at the coming session of the legislature. They are blacklisting certain candidates and to others they are promising votes anywhere from 1,000 to 5,000. They have blacklisted two candidates for lieutenant-governor and have this to say in their letters regarding the candidacy of Dr. Hugh Stewart of Flint:

"George W. Welsh of Grand Rapids is a candidate for the nomination for lieutenant-governor. Dr. Stuart of Flint is his principal opponent. The medical forces are solid behind Stuart. Welsh will see that the chiropractors have a fair chance. Which do you want? Welsh, of course. If Stuart wins there is no need of introducing a chiropractor bill. So now is the time to take a hand."

We do not purpose entering into a political discussion. We are not urging any countermovement to the "Cultists' activities." What we do urge is that every doctor ascertain the merit of their local candidates and whether they are pledged to a movement that will open the doors for an inrush of pseudo-doctors. Our position is that the people of this State must be protected and that no individual shall be permitted to engage in the relieving of the sick until he can enter the scientific gate of medical training. That no individual who, with little or no literary education and only a ninety-day or even two years of manipulative instruction, shall be permitted to sell his ignorance to an unenlightened people. To that end do we recommend that you assure yourself of the position of candidates who seek your support and vote.

PROPOSED NEW CONSTITUTION

We desire once more to call to the attention of County Societies and members the proposed new Constitution and By-laws that will be presented for adoption by the House of Delegates at its first session in Mount Clemens at 2:00 p. m. on September 9th. The report of the Special Committee, of which Dr. Manwaring of Flint, is Chairman, has been published in The Journal. We urge again that each Delegate carefully study all the provisions and ascertain the wishes of the members of his County Society in order that he may reflect their desires when the House of Delegates considers this important report.

Editorial Comments

For some time we have been considering a comment upon the amount of the annual salaries paid by State hospitals, corporation hospitals and sanataria to resident physicians. Every week the Journal of the American Medical Association contains several advertisements from this type of hospitals seeking to secure the services of a physician for full time work in their institutions. The salaries mentioned usually range from $600 to $900 per year, with an occasional exception of a $1,000 or $1,200 remuneration cited. Board, room and laundry may or may not be included. We decry this penuriousness on the part of national, State and County officials, as well as the attitude of some of the medical men acting as superintendents of these hospitals. We are not referring to interne service. Our reference pertains to the quest for physicians for these hospitals, and who are required to have served their interneship in an accredited hospital.

A young lady or man can attend a business college for six months or a year, become a stenographer, and go out and seek a position. She will demand and obtain a salary of $20 to $30 per week; five days and a half work a week with Saturday afternoon, Sundays and holidays off. A yearly salary of $960 to $1,500

and even more a year. Of course, she pays board and room, but her net earning each year is greater than the resident doctor who is expected to be on call at all hours, day or night.

A nurse will serve in a training school for 30 or 36 months with an admittance requirement of a high school diploma. On graduation she goes on private duty at $7 per day. Grant she works only 10 months in a year—a total of $2,100, and she only pays room rent and laundry; the patient paying her board during her ten months' duty. Or, if she goes in for hospital work as a floor supervisor or operating room supervisor she will command from $60 to $125 per month—$720 to $1,500 a year with room, board and laundry.

A politician will get a job of some kind as a department head or purchasing agent and command a salary of $1,800 to $3,000 per year, with little or no educational requirements.

These illustrations can be enlarged upon revealing the discrimination in remuneration given by these public and corporate hospitals. The resident physician who must spend from 10 to 12 years in preparation and study, is on call twenty-four hours a day and must be a highly trained individual, is remunerated for his time, skill and ability at the rate of $50, $75 or possibly $150.00 per month. Less than what is paid the stenographer, nurse or civil employee whose fitness can be attained in from six to thirty-six months. We feel certain that any fair-minded individual, tax payer or politician will acknowledge this to be an imposition and an injustice.

Yes, the doctors are in part to blame. They have failed to demand fair and adequate remuneration. The rate is the same as it was twenty-five years ago. The time is at hand to demand a just increase. As aid in accomplishing this, Medical Journals should refuse to accept ads from such institutions who miserly seek to secure medical services at a 75 per cent discount. Labor demands a high remuneration for its services. Doctors should do likewise when laboring in civic or corporation hospitals.

Those members of County and State Societies who do not attend the scientific sessions of their organizations miss an annual opportunity for post-graduate instruction no other country can give and those who fail to read their medical journals are depriving themselves of a liberal medical education. Think this over.

Those who participate in State Societies; in its politics, with prepared papers and in discussions, are, or soon become, known as their profession's leaders.

Politics is the breath of life to a State Medical Society. Officers who are elected without a struggle from their friends will neither appreciate the honor nor work for the Society. The perpetuation in office of social cliques is vicious and not medical politics in its truest sense.

The movement on the part of the Grange and rural as well as labor representatives to carry the referendum which seeks to establish a state income tax should be defeated. The referendum proposes to tax all incomes over $4,000, and to do away with the property tax. This would put the burden of taxation upon a very small proportion of our citizens and would relieve from taxation a large majority of our Michigan inhabitants. It would especially impose upon doctors, for as far as we know the proposed deductions would not permit him to deduct all the expenses of his practice. This is but another evidence, doctor, that you should become actively interested in the coming election and also why you should not only vote but also exercise your influence to cause your friends to vote intelligently.

Delegates credentials have been mailed to every County Secretary. Delegates should secure their credentials from their local secretary and present them to the Credentials Committee of the House of Delegates. This is imperative to gain your seat and right to vote in the House of Delegates. The Credentials Committee has been appointed by Speaker Moll and they will be ready to pass on your credentials at 1 p. m., September 9th, one hour before the first session of the House is called to order. Don't fail to bring your credentials.

Entertainment features of the Mt. Clemens meeting will be announced at the first General Session.

In our correspondence column will be found an announcement and invitation to Michigan doctors from the Indiana State Medical Society regarding its Annual Meeting in Indianapolis on September 24-26. Our sister association has prepared a most interesting program with an array of notable and famed speakers who are recognized authorities in their respective specialties. Indiana is instituting an innovation in this year's scientific program by having it presented by such an "all star" cast. We shall be interested in the result. Section officers have been confronted with the problem of solving what is the best type of program that will create the greatest amount of interest. Opinions differ—some favoring home talent, others expressing preference for "stars." As a result each year's attendance is at such variance that a positive conclusion cannot be voiced. It is therefore fortunate that we can profit by Indiana's experience in planning our future programs. We trust that a goodly number of Michigan men will find it possible to attend the Indianapolis meeting and report their impressions to our Section officers.

We are 100 per cent for President Coolidge, his Secretary of War and their plan for a general Mobilization Day on September 12. The cheap, petty cry that is being raised in opposition by pacifists, bolsheviks and politicians of the Bryan-LaFollette type, and a few fanatic preachers is contemptible and almost traitorous. Preparedness is a desirable asset for our nation. A plan of mobilization is imperative. To know how soon, in the event of an emergency, we can mobilize our military forces, is extremely important. To actually check up and perfect details of prompt mobilization is a commendable precaution for our Washington officials to take. To know what can be accomplished should cause a feeling of contentment for every loyal citizen. We trust our members, both in and out of the Reserves, will aid in carrying out the mobilization plans and that in addition they will refute the ranting of disloyal individuals who are against perfecting a plan that is wholly in the interests of public welfare and safety.

We congratulate Dr. Haines and the University Hospital upon his election to the directorship of that institution. Dr. Haines has made a splendid record at Lapeer and has commendably demonstrated his administrative abilities during the time that he was at the head of the Lapeer Home. He possesses the respect and confidence of the people and profession of our State. As director of the University Hospital we feel confident that he will increase the esteem in which he is held and at the same time exemplify an administrative policy that will contribute to the people and the profession a handsome dividend of that hospital's value to the people of Michigan. His

selection as director will also materially increase the clinical features of the medical department of the University. No better selection could have been made. We feel certain that all our members are pleased by reason of Dr. Haines' election.

Correspondence

INVITATION FROM THE INDIANA STATE MEDICAL ASSOCIATION

August 1, 1924.

To the Editor of The Journal of the Michigan State Medical Society:

The Annual Session of the Indiana State Medical Association will be held in Indianapolis, Wednesday, Thursday and Friday, September 24th, 25th and 26th, 1924.

Some of the most noted clinicians and teachers in the United States have accepted places on the program. Among these are the following: William J. Mayo, Rochester, Minn.; W. A. Pusey, Chicago, Ill.; Edward Jackson, Denver, Colo.; Hugh T. Patrick, Chicago, Ill.; Ross Hall Skillern, Philadelphia, Pa.; Joseph C. Beck, Chicago, Ill.; Evarts A. Graham, St. Louis, Mo.; Kellogg Speed, Chicago, Ill.; Andre Crotti, Columbus, Ohio; Bransford Lewis, St. Louis, Mo.; Carl A. Hedblom, Rochester, Minn.; Major Gabriel Seelig, St. Louis, Mo.; Allenn B. Kanavel, Chicago, Ill.; Willard D. Haines, Cincinnati, Ohio; Charles F. Hoover, Cleveland, Ohio; Frank Smithies, Chicago, Ill.; Louis G. Heyn, Cincinnati, Ohio; Walter M. Boothby, Rochester, Minn.; Alfred Stengel, Philadelphia, Pa.; James B. Herrick, Chicago, Ill.; Clyde L. Cummer, Cleveland, Ohio; Chevalier Jackson, Philadelphia, Pa., and William L. Benedict, Rochester.

In arranging the program the Committee has provided for dry clinics in the forenoon and scientifific addresses in the afternoon of each day.

In view of the high character of the program to be presented, we feel justified in asking the medical profession outside of Indiana to attend the Indianapolis session and we desire to assure the members of your Association that they will be cordially welcomed at Indianapolis on the dates mentioned.

Sincerely yours,

THE INDIANA MEDICAL ASSOCIATION.

Samuel E. Earp, President,
Charles N. Combs, Secretary.

Editor of the Journal of the Michigan State Medical Society:

I have your letter of August 6th in regard to the Chiropractors, and when I got back this morning from a week's trip I found a copy of the letter they had mailed out, and evidence that they had circulated a number of petitions for me. Naturally I am not refusing any legitimate help in my campaign, and it is evident their letter which you quote, that their interest is largely their opposition to Dr. Stewart of Flint.

I think also that the records will show that I voted for their bill when it was up a session or so ago, believing that they were better under regulation of some kind, than running around loose.

I think my record in regard to health legislation in general, speaks for itself.

I was a member of the Public Health Committee for two sessions, and chairman of it one session.

Dr. Olin or any other who have been in touch with matters of Lansing, can give the best estimate of my past position.

Yours very truly,
George W. Welsh.

State News Notes

COLLECTIONS

Physicians' Bills and Hospital Accounts collected anywhere in Michigan. H. C. VanAken, Lawyer, 309 Post Building, Battle Creek, Michigan. Reference any Bank in Battle Creek.

NURSES' private home, invites convalescents and invalids; best of care, fine location. R. Rs. N. Y. C. and Interurban; best of references given. For particulars write Bessie Bileth, 566 Ely Street, Allegan, Mich.

Dr. Neil Hoskins spent his vacation at his old home in Vermont.

Dr. W. D. Ryan of Detroit, recently spent a month in Chicago, attending clinics.

Dr. and Mrs. L. E. Henrich are the proud parents of a baby son, born during the latter part of July.

Dr. and Mrs. T. P. Clifford spent the month of August in New Hampshire and along the Maine coast.

Dr. R. M. McKean returned the last week of July frow a three months' trip on the continent.

Dr. Chas. Lakoff, formerly Chief Resident Surgeon at Detroit Receiving Hospital, is now located at 62 Adams Avenue, West.

Dr. Robert Novy, formerly associated with Dr. E. W. Haass, is now located in the David Whitney Bldg., Detroit, where he is specializing in Internal Medicine.

Dr. Harold R. Roehm is now associated with Dr. E. W. May in the David Whitney Bldg., Detroit, limiting his practice to Pediatrics.

Dr. Viola M. Young has opened an office at 806 Kresge Bldg., Detroit.

Dr. Varniem Southworth of Monroe, who was married in June to Miss Helen McCorkle of Detroit, is now associated wtih his father, Dr. C. T. Southworth, at Monroe.

Dr. and Mrs. Douglas Donald enjoyed their holidays in New Hampshire.

Dr. George Reberdy recently spent some time in New York.

Dr. George Campau of Detroit, spent the month of July at Cherry Beach.

Dr. and Mrs. L. J. Hirschman are enjoying a pleasant summer in Europe.

Dr. Emil Amberg is in Europe at the present time.

Dr. Wesley Willson enjoyed a vacation period in the east during the early part of August.

Dr. W. A. Defent spent some time during August fishing on the shores of Lake Superior.

Married, on August 14th, at Sylvan Lake, Dr. Harry E. Knight and Miss Kathleen Jane Willoughby.

Dr. W. T. Dodge, of Big Rapids, has been elected President of the Board of Trustees of the Ferris Institute.

St. Mary's Hospital, Grand Rapids, is planning a campaign this fall to raise $500,000 to build a new unit to its present building.

Dr. S. W. Sippy, of Chicago, died at his summer home near Ludington on August 15th. The doctor died suddenly while planting some trees.

We repeat once more the invitation extended to our members to send in news items for publication. Our news item columns are a chronological medical history of the profession that become extremely valuable as time passes. Please assist in keeping up the record.

Dr. J. D. Brook, Grand Rapids, attended the Annual Meeting of the Upper Peninsula Medical Society at the Soo.

Dr. Eugene Boise, Grand Rapids, has been confined to his bed for several weeks. Latest reports are that he is improving.

Dr. P. M. Hickey of Ann Arbor, toured Michigan resorts during August. He also visited the new Butterworth Hospital that is in progress of construction in Grand Rapids.

Dr. V. C. Vaughan spent the vacation period at his summer home in Old Mission. Dr. Vaughan also delivered a series of lectures at the Summer School of the University of Iowa during the first part of July.

A certain "Chiro" of Jackson is threatening to mandamus the City to force it to permit him to practice in their City Hospital. It is but an effort to secure personal advertising.

If you are not subscribing to Hygeia you are failing to support your national organization which is active at all times to enhance your personal interests. Subscribe today.

Doctor, you cannot afford to miss hearing the papers at the Annual Meeting at Mt. Clemens, Sept. 9-10-11th.

Dr. Guy L. Connor spent the month of August at Mackinac.

Speaker Moll has determined to call all sessions of the House of Delegates promptly at the hours designated.

Dr. A. W. Hornbogen of Marquette devoted two weeks in August to an auto tour of Minnesota, visiting relatives and friends of his boyhood days.

Dr. M. Fishbein, W. C. Braun and Dr. W. Warren of Chicago, were golfing guests of Drs. Pritchard, Mortensen and Eggelston of Battle Creek on August 8, 9 and 10.

Dr. A. H. Edwards, Grand Rapids, spent two weeks of August at the Northern resorts.

Doctor, to acquit yourself of your citizenship privileges you must vote. To vote you must register. Attend to this.

Deaths

George D. Carnes, M. D., South Haven. Age 73. Died on August 1st, after an active practice of nearly fifty years. Dr. Carnes was a member of the Kalamazoo Academy and the State Society. At his funeral that was held on August 3rd, Dr. J. B. Jackson of Kalamazoo, at the family request, paid the deceased the following tribute:

"We have come today to honor the memory of a fellow worker. We are brought once more to realize that as the years go by, one by one, we must fall from the ranks, to have our places taken by others. In the loss of Dr. Carnes the medical profession has lost one whose place in the ranks will be very difficult to fill. For many years we have depended on his counsel as a wise physician and loved him as a dear friend, and now he has gone from us and we shall miss his counsel and his friendship.

He represented to a large degree our ideal of a doctor. He was always a seeker after what was new in the practice of medicine. He never lost the attitude of the student. He never grew too old to learn. His interest and enthusiasm for the new developments in medical science was, however, tempered by his sound judgment and broad experience. He was able to make use of the new without letting go of the old truths that have stood the test of time.

On account of his wide knowledge of medical literature and his years of experience in practice, his counsel and advice was always most valuable. We all had the highest regard for his judgment and skill. In his death we have lost a man of rare ability and judgment, both as a practitioner and a consultant.

In our medical organization he was deeply interested. He always took an active part in the work of the Kalamazoo Academy of Medicine. He became a member of this in November, 1886. He served as our president in 1890. For many years he was a member of the Board of Censors, the executive committee, of the Academy. When the Academy became affiliated with the reorganized State Medical Society he was appointed as Councilor of the Fourth District representing Van Buren, Kalamazoo, Cass and Allegan Counties. In this capacity he rendered valuable service in the management of our State Society.

Thus he had a large part in shaping the policies and activities of both our State Society and of the local Academy. His good judgment and sound common sense made him one upon whom we always depended for correct decisions and advice in regard to matters of medical organization.

We shall miss Dr. Carnes as a wise physician and a valuable consultant. We shall miss him as a leader and advisor in our Medical Societies. But even more than this we shall miss him as a true friend. His perfect honesty, his absolute integrity, his fairness in all differences of opinion, his loyalty and sincerity made him a man whose friendship was prized by all. Those who knew him best loved him best. I think we shall always remember him as one who was a true friend. We shall all be better physicians and better men because we have known him and had him as a friend.

Dr. Carnes has gone from this world of toil and struggle, but his spirit and his memory have not perished. These shall live on to inspire us in our toil and struggle. We shall remember him and his memory shall help us to higher and nobler achievements in our work as physicians. (Continued in Adv. Sec. p. XIV.)

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III.

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IV.

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V.

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HOUGHTON CO.

The Houghton County Medical Society held its regular monthly meeting at the Douglas House, Friday, Aug. 8th.

Dr. John Sundwall, head of Department of Public Hygiene at the University of Michigan, was present and addressed the Society on "Public Health Work" as related to the establishment of the Preventorium Clinic. His paper was discussed by Drs. Fischer, Scallon, LaBine and Dodge. A rising vote of thanks was then extended Dr. Sundwall for his excellent address.

A motion was made to have Dr. Buie of the Mayo Clinic give us a paper around the 25th of this month. The Society decided to hold a special meeting for that event. The Society then adjourned for lunch.

Yours very truly,
G. C. Stewart, Secretary.

Book Reviews

DISEASES OF THE CHEST AND THE PRINCIPLES OF PHYSICAL DIAGNOSIS: by George W. Norris, M. D., and Henry R. M. Landis, M. D. Third edition, 907 pp., 433 illustrations. Cloth, $9.50. W. B. Saunders Company, Philadelphia and London.

Revised, enlarged and in parts re-written this third edition of a practical text on diagnosis of the heart and lungs in health and disease is materially enhanced. It contains well rounded descriptions of the diseases affecting the organs of the thoracic cavity. It is a contribution that will continue to be of definite profit and assistance to its readers and students.

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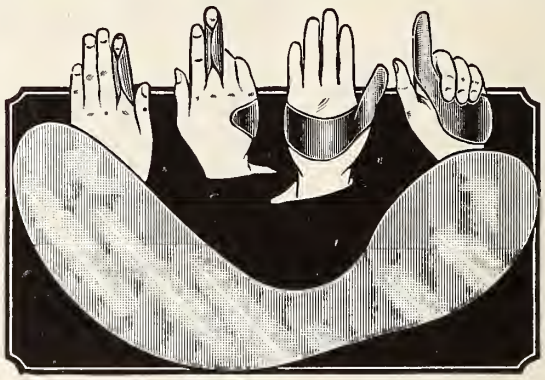

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Original Articles

PRESIDENT'S ANNUAL ADDRESS—TWENTY-FIFTH ANNIVERSARY OF THE MICHIGAN STATE BOARD OF REGISTRATION IN MEDICINE

GUY L. CONNOR, A. B., M. D., F. A. C. P.
DETROIT, MICH.

In 1905, Doctor Beverly D. Harison delivered his Presidential Address on "Medical Education in Michigan from the Standpoint of the Michigan State Board of Registration in Medicine." Since that time no address involving this subject has been presented to this society. Many amendments and subsequent changes have taken place in the past twenty years. Therefore, I thought this subject might be of more or less interest to you all.

Prior to 1883, Michigan had no regulation or law governing medical men. Any one could practice medicine in all of its branches if he or she so cared to.

In 1883, the Howel Act was passed under the title of "An Act to Promote Public Health." It registered all persons who had been practicing medicine, whether they were medical graduates or not. It also provided for registration with county clerks for persons who had graduated from "legally authorized" medical colleges, by making an affidavit covering their qualifications, with the county clerk. The county clerk had no authority to review or question registrations thus made.

In 1899, the Chandler Act was passed. It created a state medical board; it required a re-registration of those practitioners who were legally registered with county clerks under the 1883 Act; it rejected some 3,000 fake or correspondence graduates of disreputable medical colleges; it created an accredited medical college list; it provided for an examination for those persons who were not graduates of such accredited medical colleges; and it established a reciprocal relation with Wisconsin and Indiana under the Michigan plan (1902).

In 1903, the Nottingham amendment was passed. This amendment gave the Michigan State Board of Registration in Medicine control of entrance requirements to medical colleges, with a minimum standard of a diploma from a recognized high school (having a classical course) or equivalent credential, or in lieu of such credential a certificate, obtained after a written examination, from a board of preliminary examiners, established under the authority and direction of the Michigan State Board of Registration in Medicine (standard of 15 units). This amendment also provided for board examinations for all applicants. These applicants had to qualify for such examinations as graduates of accredited medical colleges, listed by the board. This amendment also further provided a discipline clause for the cancellation of licenses of medical men who advertised immorally.

The 1907 amendments extended the discipline clause. Under the former acts, licentiates charged with unprofessional conduct and other offenses, appeared before the board and the evidence involving the charge was heard by the board and the penalty, if any, was administered, in case of conviction. The 1907 amendments created an entirely new procedure. A licentiate charged with violation of this clause, which created a criminal misdemeanor, was arrested and tried under the criminal laws of Michigan. If found guilty, was fined or imprisoned. Upon final conviction, the licentiate was notified to appear before the board to show cause why his license should not be suspended or cancelled.

The 1911 amendments ("An Act to Prohibit Certain Classes of Immoral Advertising and Providing Punishment for Violation Thereof") created a separate act covering immoral advertising, including venereal and sexual diseases or other objectionable matter. It made it illegal for newspapers and people (including physicians) to advertise contrary to this act, either by circulars, cards, or by any other method.

The 1913 amendments gave the board authority to establish standards of both preliminary and medical education and author-

ity to recognize or non-recognize not only medical schools, but also secondary schools and all institutions directly or indirectly connected with the education of physicians. It provided for the examination of cult practitioners of medicine, provided they could qualify with a standard high school diploma or its equivalent and required them to pass the board examinations in the fundamental subjects connected with diagnosis and management of ailments and diseases. It does not permit the cult practitioners to use drugs or to practice surgery or midwifery. It created the definition of the legal term of the practice of medicine, which is broad enough to include all possible forms of diagnosis and treatment, whether they be physical or mental. The definition of the legal term of the practice of medicine is as follows: "In this act, unless otherwise provided, the term practice of medicine shall mean the actual diagnosing, curing, or relieving in any degree or professing or attempting to diagnose, treat, cure, or relieve any human disease, ailment, defect or complaint, whether of physical or mental origin, by attendance or by advice or by prescribing or furnishing any drug, medicine, appliance, manipulation, or method, or by any therapeutic agent whatsoever."

Beginning January 1, 1922, the Michigan State Board of Registration in Medicine required the fifth or hospital intern year. The hospital year has to be taken in a standardized hospital giving a rotary service, with four months in medicine, four months in surgery, two months in obstetrics, and two months in the laboratory. Whether this is the correct division of time or not, the next few years will tell. However, a physician trained along these lines, should and undoubtedly will, make a thoroughly competent general practitioner. I feel that, if he cares to become a specialist, he should do general practice for at least five years (preferably ten years) and then take his special course along lines he has found congenial to himself.

Until January 1, 1926, the Michigan State Board of Registration in Medicine allows all who have successfully completed their four year medical course, to take the board's written examination at that time. Their licenses, however, are held up until the applicants have completed satisfactorily to the board their hospital interne year.

Beginning January 1, 1926, the Michigan State Board of Registration in Medicine will require all applicants for license not only to have taken their written examination, but also to pass a practical clinical examination as well. This examination is to be taken after the completion of their interne year. The following results are obtained by these methods:

(1) The board will be in a position to know whether a hospital is giving its internes the proper kind of service or not.

(2) The board will know whether the interne is well grounded in his work and thus render the public a higher and more uniform grade of service.

(3) Reciprocal relations with other states will be greatly improved. A Michigan license holder will have no difficulty in locating in reciprocating states as he sometimes does at the present time.

(4) It will make the Michigan license one of the most highly prized of all state licenses.

At the present time eleven out of 82 medical schools in this country have adopted the requirement of a fifth or hospital interne year, to be spent by the student as an interne in an approved hospital or in some other clinical work before they grant the student the degree of Doctor of Medicine. This was done because these schools recognized the need of practice as well as theory in medicine. They believed that it was for the best interests of their students to control this year and to make the faculty of the medical school responsible for the same. A supervisor from the medical faculty was assigned for the fifth year, who reports both upon the work done by the student and the facilities provided by the hospital. If both are satisfactory, the degree of Doctor of Medicine is granted at the end of the year.

The eleven schools who require the interne year are as follows:

University of Minnesota Medical School, (1900).
Stanford University Medical School, (1914).
Rush Medical School, (1914).
University of California Medical School, (1914).
Marquette University School of Medicine, (1915).
Northwestern University Medical School, (1915).
University of Illinois College of Medicine, (1917).
Loyola University School of Medicine, (1917).
Detroit College of Medicine and Surgery, (1919).
College of Medical Evangelists, (1922).
University of Nebraska College of Medicine, (1923).

Ten state licensing boards now require the hospital interne year:—

Pennsylvania, (1914).
New Jersey, (1916).
Alaska, (1917).
Rhode Island, (1917).
North Dakota, (1918).
Washington, (1919).
Illinois, (1922).
Michigan, (1922).
Iowa, (1923).
Texas, (1924).

The necessary essentials in a hospital, approved for interne service, are as follows:—

(1) There shall be an organized staff, willing and able to assume the obligations of teach-

ing internes by personal instruction and by monthly conferences.

(2) The hospital must have a pathological department, suitable laboratories, X-ray equipment and roentgenological, library and proper quarters for internes.

(3) Real records of cases must be systematically taken and properly filed, under the care of a record clerk.

(4) The work of the internes must be regulated so that they will systematically take up history taking, clinical laboratory work, X-ray, anesthesia, maternity cases, necropsies, responsibility for the diagnosis and care of patients, surgical dressings and operations.

(5) The service should be rotary in character. In a general way, four months should be spent in medicine, four months in surgery, two months in obstetrics and two months in the laboratory.

It is true that many hospitals may properly fulfill their duties to the community and at the same time be unsuited for teaching purposes. The hospital may be too small, it may care for only one special class of patients, its staff organization may be unsuited for teaching, and it may lack certain departments and laboratories, to provide which might be to install unnecessary equipment at a prohibited expense. Such institutions should employ a paid medical resident rather than try to qualify as a hospital for interne training.

RESUME

(1) The Board is composed of ten members, with adequate representation from the several schools of medicine (not systems of treatment). Seven members are required to form a quorum or transact business. This has prevented hasty and ill-advised board action.

(2) The authority of the Board without further legislative action to set minimum standards in detail of preliminary and medical education, makes it possible for the Board to meet national and state educational standards as they arise and to efficiently administer the same.

(3) The Board has the authority to designate for recognition secondary schools, literary and scientific colleges and medical colleges or other institutions involved in medical education.

(4) The Board has the authority to control the methods of examination for license and to omit or add certain subjects for examination and to lower equitably the normal required percentage (75%) of correct answers in cases where the applicant has been in reputable practice for five years or over.

(5) The Board has the authority also to use its best judgment under the indorsement or so-called reciprocity section of the Michigan Medical Act.

(6) The drugless practitioner's clause is practical and sufficient.

(7) The discipline clause of the act is superior to like clauses in other state acts from the fact that a better and more constitutional method is provided. Delays of trial and errors of judgment, necessitating appeal, are avoided. Also all methods of immoral advertising are prohibited, and the division or splitting of fees is made a cause for cancellation of licenses.

(8) The Michigan Medical Act has been held constitutional by the Michigan Supreme Court and by the Supreme Court of the United States.

(9) The Legal definition of the practice of medicine is broader than any other definition passed by any one of the legislators of the several states.

THE HOSPITAL AND THE INTERNE*

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President Michigan State Board of Registration in Medicine.
MUSKEGON, MICH.

The interne question seems to have bothered many of the hospitals during the past few years, and I have been asked to read a short paper explaining the attitude of the Board of Registration in Medicine towards the subject. In 1918, the Board passed a ruling to take effect in 1922 that all physicians requesting a license must first serve a year's interneship in a recognized hospital. That means a hospital composed of efficient departments treating cases in all the branches of medicine. The resolution also stipulated a rotary interneship of which I will speak later. Since 1918 many inquiries have come to the Board concerning the method of becoming recognized, in order to obtain internes.

Let us first briefly consider what a medical student receives during his four years in the Medical School. It is at its best a conglomeration of information. I say this not as a criticism of the Medical School. It cannot be different. During his first and second years he is introduced to the elementary sciences. These are extremely important, but his mind has not been trained to medical thinking, and so most of the information gathered at this time remains with him but a short time. When he reaches the third and fourth year he is carried quickly through all the branches of clinical medicine. An attempt is made to acquaint him with nearly every known disease. It is obviously impossible to do this thoroughly, so that upon graduation, he has a feeling of having been flooded with a multitude of information, most

*Delivered at General Session, 104th Annual Meeting, Michigan State Medical Society, Sept. 10th, 1924, Mt. Clemens, Mich.

of which he cannot hold. He tries to choose from this certain parts which he considers important, but, being all too new at the game, is really not competent to choose. So he passes out of the Medical School with very little training to enable him to think along lines of clear clinical reasoning. It would be well at this point, if time and money were available, to send him again over the four years of medicine. He would then be able to gather from the pre-clinical subjects a vast amount of well organized information, and to arrange logically his knowledge of the clinical subjects.

This organization and arrangement of knowledge in the past has been denied many medical students, because they have not interned. Since it is obviously impossible to expect our students to repeat their course, we have insisted that they do the next best thing, take one more year in a good hospital. During this last or postgraduate year, he comes in contact with the actual practice of medicine. He sees a rather large number of patients being treated by different physicians and is able to organize his knowledge by actual use, a thing that would require several years in practice alone.

The average young practitioner sees only a few cases his first year and this number is gradually increased as the years go on. Most of his first cases are "transient"—they are persons who go from one doctor to another, never staying with one long enough for him to get an accurate knowledge of their case, so that at the end of three or four years, the young physician has had very little useful experience.

We all understand that in the practice of medicine, it is experience that counts, because of the variable forms of disease. During an interneship of one year, a student is in actual contact with about 1,500 cases and sees from three to four times that number being treated by other internes. It would take him from 5 to 10 years to see that number of cases in practice, so the interneship gives him the experience that he can get in no other way. Of course it is obviously impossible, no matter how large the hospital, for an interne to see every known disease, but he sees the more frequent ones many times, and thus becomes acquainted with a goodly number of the ailments he will meet his first years in practice.

Another very important benefit derived from a year in a hospital is knowledge of how to handle patients, how to gain their confidence and how to please them. All internes do not take advantage of this; many of them acquire the habit thinking of "No. 215" or the "Case in Ward B," and lose sight of the human side of medicine. It is unfortunate that this exists and we should encourage our hospital superintendents to fight against these tendencies. After all there is no treatment quite as beneficial for a patient as a human interest in his ailment.

In these days of hospital standardization, we are all continually reminded of the importance of records. The men coming into the profession will not keep records unless they are taught, and one of the most important duties of an interne is the record keeping. This is as it should be because if they do not write records, as internes, they will not as practitioners.

While the student is in school he is told of a multitude of laboratory tests and procedures, many of them interesting, many of them useful, and many of them unpractical. He cannot decide which are useful except by use, and it is during his interneship that he acquires the habit of asking for laboratory test only when they are needed. One reason for this is because he makes most of them himself. The natural tendency to be lazy which is present in all of us, quickly eliminates the useless ones. He learns the value of good laboratory work and learns to differentiate between good and bad laboratory reports.

Let us now attempt to outline an ideal interneship. It should be one that gives the student experience in all the clinical branches, medicine, surgery, obstetrics, laboratory and the specialties. This experience should include the actual charge of patients in each of the branches. These can either be non-pay cases of private physicians which are turned over to the interne or they can be charity cases accepted by the hospital for that purpose. He should keep up the records, history, physical progress notes and treatment sheets on all cases and be familiar with all cases, private and ward, on his service. Such a service cannot be given without co-operation by the attending physicians. They must be ready to give some of their time to instruction and discussion of the cases. They must remember that all the knowledge necessary to good work is not in the books and it is this information that must come from them. Many hospitals have adopted the plan of monthly staff meetings. At these meetings the deaths and interesting cases are discussed and their treatment explained. In this way the interne and staffmen are benefited by the knowledge of all.

It might be well at this time to outline briefly what is expected of the hospitals as regards the service offered internes. This has been stated in a communication from the Board of Registration in Medicine to the hospitals relating to the standardization of hospitals.

First I want to emphasize the point that the service given the interne is secondary to the treatment given the patient. The interests of the patients are always first. It is for this

reason that the work of the interne should be carefully supervised by the chiefs.

It has been considered necessary to require the internes to serve on a rotary basis. This means that the work is to be divided into the four basic branches, Medicine, Surgery, Obstetrics, and Laboratory. It is obviously impossible when there is only one interne to expect him to confine his activities to one department at a time, but the educational side can be so divided. The year should be divided into four periods of three months each and during each period he is under the tutorship of one of the chiefs so that during the year he receives instruction in all the branches from men who have made these branches their specialty. It is in this way that he is best fitted for general practice. It is not the duty of the board to license young men to specialize. A specialist can not succeed without the necessary general training. The wording of the license granted in Michigan implies that the recipient is qualified to practice all branches of medicine, and we are going to see that they are capable of doing just that.

It has been said that the physicians intending to practice in outlying communities do not need the training in laboratory work. This is not true. They need it greatly, because they will be expected to do all their work themselves and it is truer now than ever before that laboratory work is important. The city practitioner on the other hand should be trained in the laboratory in order to differentiate between good and bad laboratory reports.

It is obvious that in this plan of training the staff physicians must be willing to devote a part of their time to the instruction of the internes. They must expect to do this for the hospital and the better they do it, the better will be the internes that are attracted by their hospital.

POINTS OF INTEREST RELATIVE TO THE EDUCATION AND LIVES OF THE HARD OF HEARING*

W. G. BIRD, M. D.,
FLINT, MICHIGAN

In choosing this subject I have in mind the small amount of information one finds along this line in our medical literature; and knowing that the members of our section are always charitable, I hope to be able to stimulate some of you to more active interest in these unfortunates.

When I speak of hard of hearing I do not include the congenitally or totally deaf, but those whose deafness has developed after they have learned to speak; whether it be early in life, middle age or later, whose education has been interrupted or whose vocation in life must be abandoned, because they can no longer hear the human voice under ordinary conditions.

In the year 1903 the first school for teaching of lip reading was established in New York by Edward B. Nitchie, an honor graduate of Amhurst, who had been studying the art for his own benefit. Many were attracted to the normal department of Mr. Nitchie's school, who, after graduation, established schools of their own in Chicago, Washington, Boston, Los Angeles, San Francisco and other cities, until at the present time nearly every large city in the United States has a private school for this work.

In the autumn of 1913 the Volta Review printed an article by Dr. Harold Hays of New York, in which he advocated social work for the adult deafened. On November 12, 1913, Dr. Hays was elected to membership and in six months he became the first president of the reorganized New York League for the Hard of Hearing, dedicated by him and his associates to every possible form of service to the deafened, known or yet to be discovered without limitation of race, religion, sex or age.

In May, 1914, Dr. Wendell C. Phillips, also of New York, was enlisted by a member of the league, who was a patient of his. As Vice-President of the league, and later as founder of the American Federation of Organizations for the Hard of Hearing, Dr. Phillips has directed his efforts towards interesting the otologists of the United States, until today, many of them are giving the movement their approval and in many instances their hearty support and co-operation. Doctors Phillips and Hays are now part of a standing committee appointed by the American Medical Association to look after the interests of the deaf and deafened through that society.

Teachers are hard to find, in fact, they are at a premium, so to speak. As it takes from four to six months to learn the art of lip reading, why would it not be a capital idea to establish in our State Universities a special department for normal training of these teachers?

Flint was the fourth city in the United States to open a special department in its primary grades for the study of lip reading. I can best tell you what has been done there by reading part of an article by Miss Pauline Smith, in charge of the work. This paper was read before the Society of Progressive Oral Advocates, in convention at Frankfort, Michigan, July 20, 1924, and published by Dr. Goldstein's new quarterly journal, Oralism and Auralism for July, 1924.

"Flint took her place among the enlightened when she became the fourth city to establish lip-reading classes for the hard of hearing child in the elementary

*Chairman's address, Section Ophthalmology and Oto-Laryngology, Michigan State Medical Society, Annual Meeting, Mount Clemens, Sept., 1924.

schools last year. She owes the organization of this work to the untiring efforts of Mr. Walter O. Smith, in behalf of the children, to the hearty co-operation of Dr. E. E. Lewis, Superintendent of Schools, and the open-minded and progressive men of the school board. Every department worked to start the classes toward success.

"On Monday, December 3, 1923, I was told to report for duty and on that date came into existence the classes in lip-reading. A survey, by the teachers in the twenty-two elementary buildings, with an enrollment of twenty thousand pupils, had already been made to ascertain the number of cases in need of speech correction as well as those in need of lip-reading. The total number of cases reported to Dr. Lewis was eighty-one, but he did not feel that the distinction between the hearing and speech cases had been quite clearly made. So the first step was to resurvey these lists. Miss Sheldon, Supervisor of Special Education, showed keenest interest in this work and a thorough understanding of the difficulties an utter stranger in Flint would encounter in checking up the work. She stayed with me for the first week and we visited all the cases and at this stage of the work we asked the co-operation of the Department of Hygiene. They responded to our appeal with much enthusiasm. Every child thought to have defective hearing was given a chance for a thorough ear examination at the school clinic. In this way we made a start toward educating the public to the value of care and conservation of hearing in the school child.

"The first class was held Wednesday morning, December 12th. We have now established centers for the classes in eleven schools, the children coming from other schools to the center nearest them. The final enrollment was fifty-nine, comprising pupils from the kindergarten to the eighth grade. This number has remained practically constant throughout the year. Many new pupils have been sent us, but in the shifting population of such a town as Flint there is usually one leaving for every new one added. The children have been classified according to school standing as nearly as possible, each group having two half-hour classes a week. After seven months of classes we are able to point to many cases wonderfully helped through lip-reading. The children testify to the help received and the teachers verify these testimonials.

"As the work is still in the pioneer stage, there naturally will be many changes before the class organization is perfected. Eventually, I believe, the worst cases must have a period for lip-reading every day; and the first and second graders would profit by being segregated. A competent primary teacher who is also capable of teaching lip-reading should be in charge of the latter. When they have been taught the fundamentals of the first two school years and have a good knowledge of lip-reading they should be allowed to continue their work in the atmosphere of the ordinary school room. The problem of material is truly a difficult one. The underlying principle seems to be exactly the same as that of teaching a child to read, or Mr. Nitchie's theory for adults, but so far as I know there is no book which could be placed in the schools as a text book.

"Next year we hope to do much toward educating the general public to the benefits derived from the study of lip-reading. I have already held demonstrations for the parents in a few of the schools, and expect to continue these demonstrations until the parents of every hard of hearing child has had a chance to watch the expression of their child change from that of questioning, strained attention, to that of happy, intelligent understanding. We are also planning to have a systematic group test of hearing in every school room in the city. Flint has been a pioneer in giving every child a thorough dental examination; we hope to make her one of the pioneers in giving every child a thorough ear examination."

The examination of our school children, as carried on by nurses under the instruction of physicians, while not perfect, is accomplishing wonders. Many little fellows with enlarged and diseased adenoids and tonsils, those who are hard of hearing, and those with discharging ears, are detected and their parents are informed of the serious results that may happen if the child is not given proper medical and surgical attention.

Boards of Education are beginning to establish day schools for the teaching of lip-reading and speech defects. Detroit has a wonderful institution of this kind, with a corps of excellent teachers, under the supervision of Miss Van Adestine, who has a national reputation as a teacher in this line. Dr. Emil Amburg should also receive commendation for the capable work he is doing in this institution, for in his usual painstaking way he is spending valuable time in making physical examination, testing of hearing and classifying different degrees of deafness.

As otologists, naturally we are in a position to advise, encourage and assist those unfortunate patients who, after systematic examination of the hearing mechanism, show damage beyond repair. Our responsibility should not end with the examination, nor should we cast him to depths of despair by simply informing him that his hearing cannot be improved and will probably grow worse. We should spend a little time explaining his condition, put him on his guard against "quacks," turn his thoughts, if possible, toward the future and what can be accomplished without perfect hearing. Explain about lip-reading and inform him of schools and organizations for the hard of hearing, where lip-reading is taught and social intercourse maintained. Encourage the organization of such societies in your city. Subscribe for the Volta Review and keep it on your reception room table. This magazine is published monthly by the Volta Bureau, Washington, D. C., and contains much news and information for the deaf and hard of hearing. If in need of any special information, write the Volta Bureau and it will be freely given.

It is of interest that the Volat Bureau for the increase and diffusion of knowledge relative to the deaf, was founded and endowed by Alexander Graham Bell in 1887. The Volta Bureau derives its name from the Volta prize created by Napoleon, which was conferred by the Republic of France on Dr. Bell for his invention of the magneto-electric telephone. Forming a part of the Volta Bureau is a fireproof reference library that is said to contain

a more nearly complete collection of literature on all phases of deafness than can be found anywhere else in the world.

ENLARGEMENT OF THE THYMUS GLAND WITH REPORT OF CASES

FAITH FRANCES HARDY, A. B., M. D.
GRAND RAPIDS, MICHIGAN

I propose to deal only with the clinical side of the problem, first submitting a series of case histories:

CASE HISTORIES

Case 1—L. McD. admitted to the Blodgett Home for Children January 18, 1919, at three weeks of age. Family and past history was negative. He had been breast fed until time of admission. His progress was good, except that he did not gain rapidly. He died suddenly on March 19, 1919, from no apparent cause. At autopsy the only abnormal finding was an enlarged thymus.

Case 2—G. K. entered Blodget Home for Children on May 25, 1920, at six weeks of age. His history was negative. He made a normal progress, except that he developed eczema on head, arms and shoulders, but this cleared up upon removal of fat from his food. He died suddenly on July 8, 1921. The only abnormality found upon autopsy was an enlarged thymus.

Case 3—One of twins. Ilene C. admitted to Blodgett Home for Children on June 11, 1921, at one week of age. Her history was negative. She was placed at once in a boarding home in the country. Her progress was satisfactory. She died suddenly without apparent cause on November 16, 1921. At autopsy the only abnormality found was a large thymus gland covering the entire surface of the heart. It weighed 22 grams.

Case 4—Twin of case 3. Irene C. admitted to Blodgett Home for Children June 11, 1921 at one week of age. Condition throughout was good and progress satisfactory, but after the sudden death of her twin, we had an X-ray examination of her superior mediastinum. This showed a slight broadening probably due to an enlarged thymus. Radium was used and the shadow was reduced to normal width.

Case 5—J. McN. came to me on May 10, 1922, for a suspected fractured clavicle. He was a very well developed fat baby who had always been well. When the X-ray of the shoulder was examined a wide thymus shadow was found. This was reduced to normal size by X-ray treatments.

Case 6—Wayne R. admitted to Blodgett Home for Children on August 15, 1922, when five days old. He made poor progress because of pyloric stenosis. December 3, 1922 he was operated upon for the pyloric stenosis. He had a stormy convalescence and vomiting continued. When placed upon a thick cereal feeding he made a rapid gain until January 10, 1923, when he had an acute bronchitis. Two days after that cleared up, he started having attacks in which he became very cyanotic and had a sudden cessation of respiration without apparent cause. These attacks lasted about two and one-half minutes and occurred once or twice daily. There were no convulsions attending these attacks. X-ray showed a large thymus, and he was given one radium application. On the second day following the radium he developed an attack of broncho-pneumonia. He was very toxic and was constantly twitching so that one could see his bed shake as one looked into the ward. He died on the third day. At autopsy the thymus was found to be small, 5 grs. Microscopically, "the thymus showed atrophy of the lymphadenoid tissue and a finbrinous tissue increase." This case is especially interesting. First, because the symptoms from an enlarged thymus did not manifest themselves until the baby had had a severe respiratory infection. Second, the autopsy findings were interesting becase of the atrophy of the lymphadenoid tissue which was found. This must have been caused by the radium given five days previously. Also there is the possibility of the effect of the radium contributing to the fatal outcome. I will discuss that later in the paper.

Case 7—Paul D. admitted to the Blodgett Home for Children on February 3, 1923, at one month of age. His history was negative, but on admission he was having cyanotic attacks every ten minutes. In these attacks he had a blowing respiration and his mouth would draw up. X-ray showed a large thymus. Twenty-four hours after application of radium, these attacks entirely cleared up. He gained weight normally, and his condition has remained good.

Case 8—Robert D. the twin of case 7, entered the Blodgett Home for Children at the same time. He appeared to be in good condition, but because of the enlarged thymus in his brother, we had him X-rayed and found an equally large thymus present, although he had had no symptoms. He received one radium treatment, which reduced the shadow.

Case 9—Glennard C. entered Blodgett Home for Children April 6, 1923, at four months of age. His family history was bad. His maternal grandmother was an alcoholic. His mother's first baby died when one month old in convulsions. Her second child is apparently normal. This baby is illegitimate. Nothing is known of the father. Past history is one of convulsions about once a week since birth. He had a severe convulsion on morning of admission, but did not have another for six days when he had another for no apparent reason. An X-ray at that time showed a very large thymus. Radium was used. On the following day he had two severe convulsions, and during one 24 hours he had 22 convulsions. No Chevostek's nor Trousseau's sign could be elicited. After this week, however, he had no further convulsions for one year, and he developed normally. At the end of the year he had a recurrence of the convulsions following a severe respiratory infection. X-ray of the chest at that time showed the thymus to be still large. Radium was used again, but I have not been able to follow the case since.

Case 10—Ross D., a colored baby, four months old, came to see me in July, 1923. Baby has always been well, and it is a large, well developed baby. Mother says it has always had a respiratory stridor, and has a tendency to throw its head backwards. X-ray revealed a moderately wide mediastinum. Baby received an application of radium which reduced the width of the mediastinum to 4 cm., still a little wide. Symptoms are materially improved, however.

Case 11—Irene P., a well nourished baby seven months old, came to me on August 2, 1923. Her first history was negative except for a cough which has been present since birth. The cough is loose, frequent, but not hard. It had the sound of excess mucus in the trachea. Examination was negative. X-ray showed a wide superior mediastinum. Chest was otherwise negative. She received radium which reduced the width of the mediastinum to normal. The cough ceased.

Case 12—Pauline M. entered Blodgett Home for Children on January 9, 1924, when three weeks old. She had a cleft palate, otherwise negative. The day after admission it was noted that she held her breath often, especially when crying. An X-ray showed an enlarged thymus. Radium was used. The day following she began to run a subnormal temperature, was cyanotic, and lost weight every day for six days. Her condition looked so bad that her people were notified. On the seventh day she gained weight, her temperature became normal and her condition returned to normal.

Case 13—Lenora S. admitted to Blodgett Home for Children August 5, 1923, when 9 days old. She was a premature baby. She did very well until October, when she began to have some difficulty in breathing, especially when taking her bottle. On November 3rd she choked during a feeding, became cyanosed until it was necessary to use artificial respiration. On November 7 she became cyanosed from no apparent reason. An X-ray of the chest showed a large thymus. Radium was used on November 10. On November 14 she began to have convulsions every two and one-half hours. On day following had 20 periods of convulsive twitchings of the hands and face, and left foot. On third day convulsive twitchings were frequent, but less severe. On the fourth day the baby was apparently all right. She has had no recurrence of the convulsions, and none of the cyanotic attacks.

Case 14—Baby A. came to the Clinic for Infant Feeding when 3 months old because she "rattled" when she breathed. The rattling had been present since birth. X-ray of the chest showed a large thymus for which radium was used. After radium, beginning the day following and for two days the baby lay limp, lifeless, and white. After two days improvement began and there has been no return of the "rattling."

Case 15—Ralph G. was first seen at the Clinic for Infant Feeding whe none and one-half months old. He breathed with some difficulty, and was inclined to hold his head back. An X-ray of the chest showed a very large thymus. Radium was used. After this respirations became increasingly difficult and he had a metallic cough. He would become very cyanotic at times and would suddenly stop breathing. He was then taken to Blodgett Hospital. The first few days in the hospital he had several attacks in which he became very cyanotic and respiration stopped. Artificial respiration was used. These attacks gradually cleared up in five days, and he left the hospital breathing quietly and having no cyanosis.

Case 16—Georgia A. came to me when two months old because of failure to gain and a crowing respiration which had been present occasionally since birth. X-ray showed a large thymus. After the use of radium the crowing ceased entirely. No reaction followed the use of the radium.

Case 17—Ethel A., a very fat baby, came to me when one month old, for "rattling" in the chest which had been present since birth. X-ray showed a large thymus. Radium was used but no improvement in symptoms occurred. A second X-ray taken two months after the first one showed no reduction in the width of the shadow. A second application of radium has just been made.

Case 18—Rudd D., a newborn baby, started having cyanotic attacks when one day old. X-ray of chest showed a large thymus. Radium was used and the thymus was reduced to normal. Following this there was a complete cessation of the cyanotic attacks.

DISCUSSION

Two years ago Blackfan and Little of Cincinnati, did some work to determine the frequency of enlarged thymuses in normal infants. They X-rayed sixty infants under one year of age, who had no symptoms referable to the thymus gland. They were infants who had entered the hospital for various reasons, feeding cases, otitis media, etc. In 48 per cent of the cases, they were able to demonstrate an enlarged thymus.

With this work in mind, I have had twenty babies, besides those reported above, under one year of age X-rayed for thymus. This is a comparatively small number of cases, but the results are very interesting and suggestive, although the series is too small to warrant any conclusions. None of these babies were suspected, from clinical symptoms, of having an enlargement of the thymus. Fourteen of these were normal infants. Two were cases of congenital abnormality of the heart. Three were cases of pneumonia, and one was a week old baby that had a stricture of the small intestine. In these twenty cases, we found ten cases of enlarged thymus, (50 per cent). In all of these cases the X-ray examination and the radium treatment was given by Dr. Thomas Menees of Blodgett Memorial Hospital.

It is interesting to note that no thymic shadow was found in the three cases that had some congenital defect, for the two seem to be very closely related. The relationship has been so marked that in Ann Arbor Pediatric Clinic, they have roentenograms taken of the chests of all cases showing any congenital defect, and have them examined carefuly for thymic shadows.

Blackfan and Little based their belief that the shadow found in the X-ray examination of these infants was due to an enlargement of the thymus, because, (1) the shadow disappeared after exposure to the roentgen ray; (2) it could not be distinguished from the shadow which at autopsy was proven to be cast by the thymus. (3) It was identical with that found in patients with clinical evidence of an enlargement of the thymus.

The criteria of Blackfan and Little held good in these cases. Nine of the cases which showed enlargement of the thymus have been treated with radium with a reduction in the shadow. One case had two treatments with X-ray, but did not return to be checked up.

Greenthal, formerly of Ann Arbor, reported a series of 2,000 cases in children from a few weeks old to twelve years of age in whom a clinical evidence of enlarged thymus was made in 90 cases, (4.5 per cent). In 351 cases of this series an X-ray of the chest was taken and 25.6 per cent of these were found to have an enlarged thymus. The percentage here is much

smaller than in Blackfan and Little's series, because the majority of these cases were over six months of age and many were as old as twelve years.

Liss has shown, too, that the percentage of cases with enlarged thymuses become less as the child grows. For example, he found 42 per cent of 119 newborns to have an enlargement of the thymus, sufficiently large to be considered pathologic and yet without gross symptoms. He re-examined these cases every month for the first year of life. As the work progressed, retrogression of the shadow took place, the greatest change within the first months of life, a steady change as the year went by, so that spontaneous disappearance of the shadow took place in the majority of the cases. Some, however, persisted until the second year.

There has been a great difference of opinion as to what constitutes an enlarged thymus. Liss considered thymic shadows measuring 3 cm. or more transversely as pathologic. It seems to me that it is unfair to apply an arbitrary measurement as the criterion. It would be more exact, I think, to take a comparative measurement, as the relation existing between the width of the chest wall and the thymic shadow, or between the width of the vertebral body and the thymic shadow.

Absence of a large shadow does not in all cases eliminate the presence of a large thymus, for the X-ray plate gives no idea of the antero-posterior diameter of the thymus. Also the thymus is never fixed, since its position will vary with inspiration and expiration and to some extent with systole and diastole of the heart. When the heart is in diastole or flattened out and the diaphragm relaxed and down (at end of expiration) there is a tendency for the great vessels and mediastinal tissues to lengthen out. If the heart is in systole, contracted and upright, and if the diaphragm is contracted up, the heart is pushed up and the mediastinal tissues above are pushed together, broadening the mediastinal shadow.

Cases of suspected thymic dyspnoea, too, are reported which showed no thymic shadow, but which were relieved by radiation. Greenthal reported a case in which the X-ray showed no large thymus, but which resulted in sudden death. At autopsy a hyperplastic thymus was found.

A gland weighing more than 15 gms. is generally considered to be pathologic. A good many, however, have placed the upper limit of normal at 10 gms.

DIAGNOSIS AND SYMPTOMS

Clinically, the diagnosis can be made by finding dullness in the second interspace, at least one inch to the right and left of the midsternal line. This percussion of the thymic dullness is a very uncertain affair and requires considerable skill. It is best determined with the baby's body in a horizontal position, and with the head in semi-flexion and with the arms extended and clasped about the head.

The symptoms which would lead one to suspect the infant had an enlarged thymus are:

1. Some difficulty in breathing. This may be only paroxysmal and occur only during crying spells or fits of anger, or it may consist of a stridor which is most marked during inspiration. This stridor may also be present only during a respiratory infection.
2. Cyanosis may be present, too, but is usually paroxysmal.
3. Very commonly these infants have an excess of mucous which causes them to choke easily. This choking may occur only during nursing, and it may make nursing quite difficult.
4. These children may have frequent attacks of croup which are not benefited by the usual therapeutic measures.
5. Very often the infant has a tendency to retract the neck, and yet the retraction of the neck causes increased cyanosis and difficulty in breathing.

A frequent experience is to meet cases in which no symptoms have been present until after repeated infections have occurred, as in Case 6, reported above.

It has been generally believed that it occurs most frequently in well nourished children, but that is not always the case. It frequently occurs in the marantic. Only one of the cases reported above was a fat baby.

These babies seem to be more subject to colds and infections than do babies in whom no enlarged thymus is found.

Sudden death is an occasional occurrence in these cases. It may occur in cases in which there have been no symptoms to suggest an enlarged thymus. They may occur without any premonition whatever, or death may follow some trifling accident, as the injection of antitoxin, an anesthesia, etc.

PROGNOSIS

The question which concerns us most at this time is what the prognosis in these cases which are discovered to have an enlarged thymus, and what shall be our treatment?

Of course, the prognosis is generally good, as shown by the work of Liss. However, there are a few cases in whom the large thymus persists, and the care of whom involves considerable risk. There is no means of knowing what cases will spontaneously recover, neither is there any means of knowing which cases will undergo operation safely. Repeated infections in a patient who may have only a moderately enlarged thymus and in whom there is no history of thymic symptoms, may prove disas-

trous, for these patients undergo illnesses badly, and react violently to infections which would cause only a moderate disturbance in normal infants. If a routine measure could be established to rule out these cases the death rate in pneumonia and other severe infections would be materially reduced. It seems to me, therefore, that the only safe thing is to give the patients the benefit of a treatment.

TREATMENT

But if we are to have a routine measure for the treatment of these cases we must find one which is devoid of danger to the baby. So far in the literature, I have not been able to find the report of any harmful effects following radium treatment. However, in six of the cases reported above, untoward symptoms arose after the use of radium. These symptoms were severe enough to cause considerable worry to us as well as to the parents. In Case No. 6 a broncho-pneumonia in an unusually severe, toxic form developed on the second day following the use of radium, and resulted fatally. This was the first case which we had had which made us question the use of radium.

In Case No. 9 a week of severe convulsions occurred following the radium. These lasted one week and did not recur.

In Case No. 12 on the day following the radium, the baby began to run a subnormal temperature and was cyanotic. Her condition appeared very critical. At the end of one week she was back to normal.

In Case No. 13 very severe convulsions, associated with periods of cyanosis, started on the fourth day following radium, and persisted for three days. The baby appeared to be in a critical condition. So far we have not been able to induce the mother to bring her back for even an X-ray to check up the size of the thymus, because she is afraid of a recurrence of the convulsions.

In Case No. 15 there was an increase in the cough, periods of cyanosis and suspended respiration which lasted about one week following the use of radium.

Of course, these cases in which there appeared to be a harmful reaction following the use of radium are few in number, but, at least, they are very suggestive. In view of the work done in blood chemistry on cases treated with radium for other disorders, the suggestion afforded by these cases is very strong.

In three cases we were able to have complete blood counts and non-protein blood nitrogen determinations before and after the use of radium. We found immediately after the use of radium a moderate leukocytosis with a small increase in the polumorphonuclears, and an increase in the nonprotein blood nitrogen of about fifty per cent. In these infants the normal non-protein blood nitrogen varied from 23 mg./100 c.c. to 27 mg./100 c.c. In Case No. 12 the non-protein blood nitrogen rose to 33 mg./100 c.c. the day following radium, and on the second day reached 37 37 mg./100 c.c. On the third day it returned to normal. The white blood count here was 10,500, with polymorphonuclears of 28 per cent and small lymphocytes of 72 per cent. After radium the white count rose to 14,850, with polymorphonuclears of 31 per cent, and small lymphocytes of 69 per cent.

In Case No. 15 the non-protein blood nitrogen rose to 37 mg./100 c.c. after the radium. Before the radium the white blood count was 10,200 with polys of 74 per cent, and small lymphocytes of 21 per cent. After the radium the white count rose to 13,800 with polys of 81 per cent and small lymphocytes of 11 per cent.

In Case No. 9 the non-protein blood nitrogen rose to 34.7 mg./100 c.c. after the use of radium.

That increase may be one of the causes of the symptoms produced. There may be other factors, also, which we do not yet know.

We have not been able to find any reason why some cases should have so severe a reaction and others not any at all. We thought, at first, that the larger the gland, the more likely were we to have a severe reaction, but that did not hold true. Neither did the age of the child play any part. Case No. 18 was that of a newborn baby with a very large thymus which was reduced to normal size very quickly, yet there was no reaction.

The dose of radium used was that generally employed, 800 mg. hours. In addition to the usual silver filtration 2 m.m. of lead was added to filter out the rays which were likely to produce some hyperaemia or burns.

SUMMARY AND CONCLUSIONS

1. Enlarged thymus is not a rare condition in infancy.
2. It doubtless contributes largely to the mortality rate in pneumonia and other severe infections. It also occasionally causes sudden deaths during operative procedures.
3. It is desirable to find a routine measure for the treatment of these cases, but it must be one that is devoid of danger to the child.
4. In a small percentage of cases a harmful reaction seems to follow the use of radium, so it would seem better either to use X-ray with its slower results, or to use half the usual dose of radium in two treatments.
5. The reaction which follows the use of radium is probably due in part, at least, to an increase in the non-protein blood nitrogen.

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LETHARGIC ENCEPHALITIS

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No disease of the past quarter of a century has awakened such widespread interest in neurological medicine as epidemic encephalitis. It claims its interest from two special viewpoints. First, it follows very often, seemingly, such very minor illnesses. Second, the final results upon the human mechanism in complicated cases are so very serious, reducing their mentality and blasting their hopes of ever again being able to efficiently fill their places in society.

Epidemic encephalitis began in Europe in 1916-17, following in the path of the influenza. Early the next winter the disease appeared in epidemic form in Paris. It then spread to England, where it was mistaken for botulism, but the error was soon corrected by further study and investigation. Encephalitis did not remain in Europe, but soon spread to Africa, Asia, Australia and America. The disease made very rapid strides in its spread in America, following the influenza epidemic, attracting considerable attention in 1919-1921, during 1921 it being first reported as a definite pathological entity.

ETIOLOGY

Etiology of the disease to the present time is not clearly defined, except that it is quite definitely related to influenza. In 26 cases carefully studied, 16 were preceded by acute illnesses of some sort, the majority being suggestive of influenza. Just what the connection is with influenza is uncertain, other than the fact that epidemics of the two occur simultaneously. The disease must be recognized to be an acute infection, and like most acute infections there is undoubtedly a virus produced that has a definite affinity for the basal nuclei of the brain and other closely related tissues. Strauss has proven that innoculation of emulsion of human brain into the monkey produced lesions characteristic of epidemic encephalitis, and that washings from naso-pharyngel mucus membranes also resulted in experimental disease. He thus feels justified in concluding that the virus enters the system through the nose, which fact seems to be substantiated by frequency of acute choryza which ushers in the disease. It, therefore, in its early stages, might be considered infectious, and mildly contagious. —*Journal of Infectious Diseases*—1920—page 268.

COURSE OF THE DISEASE

Generally speaking, the onset is gradual, with a prodromal stage of from one to ten days. During this period we usually expect to encounter a group of symptoms accompanying an acute cold, such as acute rhinitis, simple catarrhal conjunctivitis, sore throat, tonsilitis, or bronchial catarrh.

In 26 cases studied the temperature varied from 99 to 103 degrees; pulse 78 to 120; hemoglobin percentage from 76 to 98; red cell count, 3,700,000 to 5,400,000; white cell count 2,700 to 19,200, there being definite leucocytosis in 14 cases. The blood pressure varied from 100 to 135 and 60 to 90 systolic and diastolic respectively. The blood Wassermanns were all negative. Chemistry of the blood revealed a non-protein nitrogen content ranging from 26.4 to 36.7; blood sugar 60 to 130. The metabolic rate was made in nine of these cases. Out of this number two were abnormal, one being 22 plus and the other 38 plus.

There is usually more or less headache as in other febral conditions, but generally of short duration. There is often delirium, or mania for the first few days, and the patient may require restraint. Some cases present signs of meningeal irritation, and tubercular and epidemic meningitis may be suggested. In characteristic cases marked lethargy, somnolence and athenia develops. The patient can be aroused, but if left alone stupor immediately overtakes him and he lapses back into muttering delirium. The speech is often slow, hesitating, monotonous and scanty. At this juncture, many of the

patients complain of blurred vision, or diplopia, accompanied by distress in the back of the neck. Gastro-intestinal symptoms may develop, such as cramps in the abdomen, nausea, or vomiting.

As this infection seems to have a greater affinity for the tissues composing the brain stem, the cranial nerves are most often affected. It may be stated that the third or oculo-motor nerve is most frequently involved, thus giving rise to strabismus and diplopia. Ptosis is a very frequent and prominent sign. In 24 cases pupilary disturbances were noted, one being dilated, five were unequal, ten sluggish, one no reaction, four were irregular, one large and two small.

As one observes these patients in bed, they present a characteristic masked-like expression of the face. This may be due in some to an emotional depression, and in others to weakness of the facial muscles. Riley and the writer have observed a few cases in which the masked facies continued practically unchanged in patients affected early in the epidemic. I am inclined to believe that one is justified in looking upon this pathological aspect as a fixed quantity in these cases. Along with this peculiar expression, the patient does not have normal automatic associated movements. He walks with body bent forward, arms flexed, and dragging the toe on the floor. The tremor is not as constant as it is in Parkinson's disease. There is a definite muscular rigidity. The fingers are somewhat flexed; druelling of the saliva is a very common symptom, and generally present in those who are very ill and in whom the disease becomes chronic.

Lesions in the early stages are similar in every respect to those of the non-purulent inflammation. As viewed by the microscope, the specimen represents nothing new. With such findings it causes one to wonder why such gross results should follow. The explanation evidently lies in the vital area involved, and the organs attacked, which, broadly speaking, is the mid-brain. The entire process is reactionary in type, being that of round cell infiltration in the blood vessel wall and lymph spaces. If the cause be eliminated at this stage it would seem that a complete recovery might be expected.

MORTALITY AND SEQUELAE

According to literature, the mortality has been placed at between twenty and forty per cent and ten per cent of those who recover develop some progressive nervous disorder; however, the last is a debatable figure, as some state that ten to thirty per cent recover, and that the remainder of the surviving develop a variety of post-encephalitis conditions. The factor of time since the first outbreak is throwing considerable light on the subject. The variety of sequelae is surprising, and can only be explained by lesions affecting different parts of the brain. The most common sequelae described in literature are mental, involuntary movements, Parkinson syndrone, respiratory disorders, hiccoughs, vomiting, optic neuritis, lethargy, various minor and major psychoses, and abnormality in sex function. This disease has now been active in this country only about five or six years; nevertheless, we frequently meet patients who are living examples of the ravages of this disease, some of them displaying the major outstanding complications, namely: lethargy, Parkinson syndrome, and decreased mentality.

Lethargy is a very marked feature early in the disease, thus the name "Lethargic Encephalitis." Nevertheless, patients have come under observation in which lethargy was a very marked symptom of the first illness, then the patients seemed to clear up, completely relieved, returned to their activities in life, and a little later be overtaken by a recurrence with attacks of sleepiness. This symptom may be present for a considerable length of time, and in different degrees, some even sleeping for days, and can only be aroused with effort to take food and water. This finding was present in 13 out of the 26 cases reviewed. How can this peculiar phenomena be explained, is a question that naturally confronts us.

"I have always regarded lethargic encephalitis with its remarkable fluctuation as impossible to understand, except as the result of mechanical interference with the drainage of the cerebro-spinal fluid from the third and lateral ventricles. In the active phase of the disease this may be explained by the inflammation and oedema of the tissues around the acqueduct Sylvius. When lethargy is a recurrent sequelae it may be justifiable to regard it as evidence of imperfect drainage of the ventricles due to scarring of periacqueductal tissues."—*Hunt, British Medical Journal*—Dec. 8, 1923, page 1085.

In other words, these patients are really suffering from a mild degree of hydrocephalus.

It would also be well to remember that the pituitary gland lies close in the region, and some have supposed that it might be involved, producing some symptoms of hypo-pituitarism, but thus far evidence is lacking that the hypophysis is implicated.

The Parkinsonian syndrome may well be called the gross sequelae in encephalitis. In the 26 cases analyzed, five developed typical Parkinsonian syndrome, and five others showed partial symptoms, (two characteristic facial expression and three tremors). This group of symptoms so nearly parallel that of paralysis agitans that we might reasonably expect similar pathology. Dr. Douglas McAlpine, (British Medical Jour-

nal, page 1088), makes mention of 14 autopsies on cases presenting the Parkinsonian syndrone, associated with encephalitis lethargica. The most striking fact in the various findings, and one common to all cases, was a destruction varying in amount of the cells of the substantia nigra, in the midbrain. Inflammatory changes were noted in other tissues, such as the basal ganglia, but the most definite and prominent changes were noted in the substantia nigra. McAlpine has also described a condition found which he terms classification of the blood vessels, somewhat pronounced, but not confined to, the globus-pallidus. The part most involved was the anterior half, the area being supplied by the internal striate branches from the middle cerebral artery. The alteration in the blood vessel wall was that of a reposition of fat globules in the adventitial sheath, or a hyalin degeneration, chiefly affecting the media. Calcium salts were then deposited between the adventitia and media or in the media itself. Similar changes were found in cases of idiopathic paralysis agitans. It seems reasonable to suppose that in encephalitis lethargica the circulating toxine produced degenerative changes in the vessel wall and the calcium salts were attracted to these parts. Since our attention has been definitely invited to the globus pallidus. a part of the nucleus lentiformis, it might be interesting here to study briefly the anatomy and physiology of this area.

The corpus striatum is situated near the base of each mass of gray matter imbedded in white substance. It is divided into two portions, known as nucleus caudatus and nucleus lentiformis. I wish to call attention briefly to the latter, as it is definitely concerned in the subject under discussion. This nucleus lies lateral to the caudate, and is divided into two parts, viz: the outermost zone; the putamen and the inner portion globus pallidus. Histologically, it is composed of medium sized and large pyramidal cells, the latter being more numerous in the globus pallidus. The small cells, according to Ramsay Hunt, represent the neostriatal system, whose function is that of a controlling and co-ordination mechanism. The paleo striatal system is composed of large cells, it serving a dual function, viz: production of, and control of automatic associated movements, and myotonic stabilization of muscles. The symptoms resulting from the destruction of the globus pallidus in degenerative processes would therefore be a suppression of associated automatic movements, hypertonus of body musculature and the production of more or less pronounced attitudes and tremor, occuring in the resting stage of muscles due to lack of proper myotonic stability.

The lenticular nucleus is connected with the red nucleus by fibres known as ansa-lenticularis, passing through the anterior two-thirds of the posterior limb of the internal copsul. It gives off fibres to the central gray matter of the third ventricle and to the fields of Forel.

Leaving the cells of the red nucleus the axones immediately cross, forming the ventral tegmental decussation of Forel. The fibres then become collected, entering the lateral white column of the cord, forming the extra-pyramidal tract, finally connecting with the motor cells in the anterior horn of the spinal cord.

PROGNOSIS

The prognosis is not good from a standpoint of life or development of complications. Nevertheless, it is often better than one would expect when considering the serious condition of the patient. The duration of the disease may be roughly stated to cover a period of six weeks to three months, or more, and this usually to be followed by a long, tedious convalescence. The extreme case may die in 48 hours. However, it is generally conceded that ordinary fatal cases may extend somewhat over a week.

TREATMENT

As the etiology of encephalitis is uncertain, the treatment thus far is almost entirely symptomatic. As in all acute infections, one of the first things to be insisted upon is rest, and should extend over a long period for convalescenece, in order to avoid the developments of unfavorable sequalae. The patient should partake liberally of fluids that elimination may be encouraged from skin and kidneys. The food intake should be sufficient to support the body and avoid loss of weight. The diet should be laxative in nature, thus affording a sufficient amount of roughage to encourage free bowel evacuation. Agar and mineral oil may be used in the usual dose, if needed. As these patients are quiet, often for a long period of time, they usually develop a rather obstinate type of constipation, and if enamas and the above remedies fail, mild cathartics may be used. In some of the more chronic forms which develop some of the more severe sequelae, as Parkinson's syndrome, hydrotherapy, massage and passive movements have a very valuable part to act. During the acute stage, a continuous warm bath or hot pack often aid in relieving excitement, diminishing muscular contractions an dpromoting sleep. Luminal and hyoscin in appropriate doses are often useful in con-

trolling excitement, insomnia and myoclonic movements. Rothstein uses large doses of sodium cacodylate varying from 10 to 30 grains three times a week, during the chronic stage. Particularly in those who have developed the Parkinsonian syndrone, I have given this in a few cases without any definite results. As in all acute disorders, the profession anxiously awaits the development of a serum that will react favorably. We are all pleased to give due credit to such men as Rosenow and Helmholtz who have put forth real effort in this particular line, and this paragraph on treatment would hardly be complete without calling attention to some of their works and results.

One hundred and thirty cases have been studied by Rosenow following serum treatment—85 improved and 43 showed no appreciable change. The duration of disease at time of treatment varied from two days to three years. The predominating type of the disease was reported in 80 cases of this group, viz: lethargy, myoclonics, chorea form and Parkinsonian (J. A. M. A. page 1585). Experimental studies indicate that the progressive and changing character of the disease, the exacerbations and the so-called sequelae, are due to an inactive infection by a streptococcus, which has peculiar neurotropic and other properties, and that invasion may be favored by the presence of primary foci of infection, such as sinuses, teeth and tonsils. Hence, besides the serum and other forms of treatment, a thorough search for, and when possible, removal of, foci of infection, combined perhaps with active immunization with a vaccine prepared in the hope of arresting the progress and preventing recurrences in this disease.

Whether or not spinal drainage is advisable in this disease is a question. For diagnostic reasons, a lumbar puncture is frequently necessary. However, when the spine is tapped and the fluid is cleared, only enough should be removed to permit of necessary laboratory examination, and after this no further punctures should be done, because the lowering of the intra-spinal pressure may produce a dissemination of the infection through the brain and cord. (Geo. Wilson, Atlantic Medical Journal, November, 1923, page 70.)

Dercum and Spiller, while discussing the subject before the Philadelphia Neurological Society, laid special stress upon this point. (W. G. Spillere, Archives of Neurology and Psychiatry, Volume 10, No. page 127, July 1923)—(F. X. Dercum, Archives of Neurology and Psychiatry, Volume 10, No. 1, page 127, July, 1923).

A possible exception to this opinion regarding spinal drainage in encephalitis may exist in that type of disease in which meningial symptoms may predominate and in which high cell counts are found. Rosenow and Helmholtz report acute cases which cleared up very satisfactorily by using serum, following a desensitization injection of 1 cc. of serum, three doses were given, either intravenously or muscularly in consecutive days of 5, 10 and 15 cc. doses. The injections ordinarily are continued from five to eight days. (J. A. M. A., page 2068, Dec. 16, 1922).

Thus far, no specific treatment has been brought forth. Some good results have been obtained by so-called symptomatic remedies, which assist the patient to react against the infection, and produce a degree of immunity, but in the advanced stages where major complications developed, such as the Parkinsonian syndrome little has been accomplished in the way of treatment.

CONCLUSIONS

1. Every case of encephalitis should be looked upon as a serious malady, even though it may present only one or two symptoms.
2. The majority of cases seem to develop following acute infections, such as influenza.
3. The Parkinsonian syndrome is now considered the major sequalae, and according to Dr. Petron of London, probably occurs in twenty-five per cent (25%) of cases.
4. The most prominent lesion is located in the substantia nigra.
5. Treatment thus far is very largely symptomatic.

THE PROBLEM OF THE PHYSICIAN'S RELATION TO THE PUBLIC*

WILLIAM D. HAGGARD, M. D., F. A. C. S.,
President-Elect of the American Medical Association
Professor of Surgery in Vanderbilt University
NASHVILLE, TENNESSEE

One of the problems of the present time is to supply adequate medical and surgical service to the rural communities. Unfortunately, on account of the long and expensive training incident to the medical diploma, it has been increasingly difficult to get trained physicians to practice in sections removed from medical centers and the equipment that is essential to the thorough study of an individual case. The young medical man feels starved by being temporarily divorced from touch with his colleagues and the stimulation of the laboratory and medical society. The remuneration for country

*Delivered at General Session M. S. M. S., Mount Clemens, Sept., 1924.

practice is relatively inadequate to the cost of education in medicine and as a consequence increasing numbers of present-day graduates are going to the cities and larger towns. (The older practitioners are dying out and few are taking their places. The cure must lie with the community rather than with the profession. It is unwise to bring the profession down to the simpler demands of the more remote rural communities, although they require just as competent treatment as any one else.) When serious illness occurs and operations are required, they can and do go to the large cities and hospitals, where they pay proportionately more than they do at home. (If high-grade medical service is desired by these communities, they must deserve them by the increasing of good roads and the utilization of all modern conveniences to render rural living and small town existence more comfortable and happy. Hospitals should be established in towns sufficiently large to accommodate them for the benefit of the adjoining sections. If communities wish competent service, they will procure it just like they do good preaching and good teaching. At present we are in an evolutional period where all communities have not yet caught up with the ideals and high endeavor of the profession. They can have competent medical care and they will ultimately have just what they wish.) It does not seem wise, therefore, to lower the standard of medical education, but rather to educate the people up to the need for higher medical practice so that they can support them. Any fairly prosperous countryside can afford a capable practitioner, not that the average medical man is anxious for great returns because he is notoriously unmoved by purely material recompense. He must, however, have an adequate livelihood and environs suitable for rearing and educating his family. It is incumbent upon each community to provide as far as possible the means for the encouragement of sufficiently trained medical men.

(The ignorance of the truth about medicine is appalling. It is due to our reticence to impart the facts regarding the improvements and actual results of medical practice to the public. It is so embarrassing to a medical man to have vain-glorious statements made about his individual achievements that no plan has been evolved whereby the truly wonderful accomplishments of medicine are matters of common knowledge. Every day happenings in the hospital and laboratory are sealed books to the public.) The little they know of them is inaccurate and garbled. If by chance a doctor is induced to tell some of the tremendously dramatic things that really occur under his observation, people listen, spellbound. If that sort of thing could be incorporated into the public press without involving the personal element, it would be interesting and instructive. People study art, architecture and engineering with the greatest avidity, but the thing that appeals to them most is the intricacies of the human body. (Medical men cannot themselves present these matters and are extremely bashful about doing so. If trained newspaper writers with some knowledge of medicine could be given access to meetings like this and could translate and present in a readable way the salient points in some of the papers of this meeting to the public, it would be a mine of information.) A high-grade feature writer would revel in it. This problem, though difficult of solution, should be approached frankly and squarely. The beneficences of the medical profession should not be hidden under a bushel, but should be given to the people for their enlightenment and encouragement against illness.

(If an informative, comprehensive and plain story of the contributions of medicine could be written impersonally by certain members of each Medical Society and upon occasion deal especially with the various forms of treatment that we regard as quackery, or some peculiar cult, it would be a very satisfactory way of educating the people.) The Illinois Society, through its president, devised such a pamphlet which could be circulated among those who inquire about the various cults. Accurate information, especially if it is presented in a pleasing and frank manner, is at a premium. Why cannot the Michigan Society devolve some such plan?

An interesting study was made last year at Chicago by a personal interview with something like 7,000 people to ascertain their attitude toward the medical profession. They were approached tactfully and asked just what they felt about the physician and if they had any grievances and why they consulted any so-called practitioner other than men who are regularly graduated. Investigation showed that only about 7 per cent of the people of this group were unrestrainedly inimical to the regular physician. Only about 13 per cent had never patronized any irregular cult. The remainder had at one time or another dabbled in irregular medicine. It doesn't mean that this group is wedded to such fantastic methods. Of course, when they get acutely sick they uniformly seek the counsel of the regular physician. When their feet touch "the chilly waters that separate the island of Time from the mainland of Eternity" they call distressedly for the life-guards. Among the reasons given for consulting these would-be healers was the feeling that doctors often tell one what not to do, but don't do very much for one themselves, certainly not in a physical way, which of course appeals very much to the individual. It was said that the physician charged too much. This, of course, is a prevalent attitude toward every

service that is rendered and yet the average income of the physician is, to say the least, moderate. It is not all of salesmanship to put through a transaction. The essential is the satisfied customer. The physician is so concerned with the abstruse problems of the case that he often forgets that the recognition and appreciation of the quality of the service must be "sold" to the patient as well. The complaint that we never explain the case sufficiently for the patient is probably true. The human mind demands an understandable explanation. We would do well to go a little more into detail. We are too much like the engineer on the limited who feels that when the passenger intrusts himself to his care, that all he has to do is to see that the train is run in the safest and most expert manner and that the passenger has no occasion to make any inquiries as to the route, the time, the danger, or even the disasters, but the passenger can't get into the engineer's cab. He is, however, always very close to the physician and when he isn't, his relatives and friends are. It is disheartening after the doctor has explained most carefully to all the responsible parties and to various other secondary groups, when someone comes up and says, "Doctor, I want you to tell *me* the truth about this matter."

(It is thought we think ourselves much wiser than any other group of people who treat the sick by the same method irrespective of the disease. Nobody realizes the want of more knowledge than the physician himself. There is nothing under the sun, on the earth, or beneath the earth that is not utilized if proven of value by the regular medical profession in the prevention of disease and its cure, but all that there is in chemistry, biology, physics, electricity, radium, drugs, massage, dietetics, suggestion, surgery, and sanitation that are the heritage of the world from all the studies of all the scholars of all time are at the disposal of the regularly educated, graduated medical practitioner.)

(Many people have the impression that the leaders, practitioners, teachers, or healers of the various cults have had a most thorough training. The real answer to all of the many half baked methods of treating the sick is that if everybody who is allowed to treat disease would first pass examinations upon the real essential sciences, physiology, chemistry and pathology, that while the treatment might differ, it would at all times be sane and forward looking.)

Another cause of disaffection was the attitude to our brother physician. They say we are about as friendly as two strange bulldogs. Unfortunately, this has a modicum of truth. The profession has undeniably improvved wonderfully in this regard, but we have yet to learn the truth of the statement of the man in the street, that every boost is a knock. When "A" speaks disparagingly of "B" and "B" thinks "A" a scoundrel, the patient takes the attitude that these men evidently know more about each other than they do and accept them at their mutual valuation. This unfortunate relationship would seem to disprove another jibe that has been hurled at us, namely, that one physician will protect the blunder of another. The two criticisms are inconsistent and still we fall between Scylla and Charybdis. Another objection was that we never admit any good in any other bizarre plan of treatment or mental methods. We have practiced suggestion consciously, unconsciously for time immemorial. We recognize all of its good qualities and emulate them.

(It does seem unthinkable to us, however, to apply mental healing to a ruptured appendix, to a tumor on the interior of the body that is fast becoming malignant, or to read out of a book, however good, for mental tranquility to a little child who is choking to death from the membrane that clogs the throat in diphtheria, when the antitoxin which is the plan of our Creator in its cure and dissolves it like magic, is unknown and unused.) It is alleged that the cults draw upon agencies greater than man and that the physician's treatment is mechanical and human, and yet our knowledge of the great laws of nature and the infallible mercy and helpfulness of God is that his bodily curative processes go on unerringly whether we ask Him or not and that it is done automatically for the animal as well as for the sentient beings even as He allows His rain to fall upon the just and the unjust. These various criticisms are very amusing and as the collector of them said, they are "chuck full of unadulterated lies, polite and half truths and delirious fancies." See that we profit by them. If we kknow of an erroneous impression that a person has about us it is easier to set it straight.

(The real case against the cults, fads, sects, and isms in human sickness is their inability to understand the many intricate causes of disease, its prevention, its control by scientific sanitation and the untenable belief of each separate cult that all the diseases, whether of the mind or body, can be cured by a single process, each different. They will treat anybody that will hold still and one is born every minute. Its popularity is due to those of an unstable, impressionable nervous system, who are always looking for some easy way, particularly if it is mysterious. They are unwilling to purchase health by a rational means, but want some mystical or miraculous occult force to be invoked in their aid.)

(The laxity of our laws and unawakened public opinion allow people of no fitness, with not even a high school education, to take some

ridiculously short and inadequate course for treatment of the most variable and intricate processes of disease in all its devastating potentialities, and many Americans whom Barnum loved "fall for it." The medical profession is so driven with the care of real and urgent maladies that they sometimes are neglectful of those who are functionally and psychically unfit and it is these individuals who try the cults which they think if "they don't cure you, won't hurt you." If their clientele was restricted to this group alone, it wouldn't be so bad, but they have no way of distinguishing between the communicable and non-communicable diseases, no way of recognizing incipient diseases of the vital organs and of course no definite or rational way of preventing death-dealing diseases and wrestling with their destructiveness.)

The aversion to publicity in medicine is doubtless founded on the feeling that science needs no defense, yet it was said of Huxley and Darwin that they had to fight the battle of Science with the public on the one hand, while they fought the battle of Science in the laboratory with the other. Progress is a series of battles. It is never won only by the repeated launching of offensives. It must ever be fought and with the cudgels of Truth. The fight is not for the profession, but after all, for humanity. The world should know if society is to be saved it is not by the charlattan, but by the scientist, who is willing laboriously to burn the midnight oil and labor for a generation to carve a stone that may adorn the temple of Science. A campaign of publicity must be dignified, unswerving and repeated without ceasing. Education and re-education. The story of medicine, its heroes, its martyrs, its great discoveries, must be forcefully told.

In addition to being an individual matter, it should also be one of the functions of the State Medical Society. All of the other avenues of activity are well paved, but the road to the mind and imagination and the confidence of the people, their enlightenment, and protection, but the main highway for our profession to travel for the betterment of the race must be constantly repaired. It must be a federal highway in the sense that component counties must do their part as well as the state and the nation. I believe the American Medical Association would augment its many activities to head up, map out and prosecute an active, educational propaganda throughout this country. It is the people's due. It is the profession's duty.

We should have the fullest co-operation with the state boards of health, etc., "state medicine" in its better and broader sense, not in the contract physicians' sense, or its degeneration to the plane that it was in Germany or the panel system existing in England, but modern American medicine with a larger outlook wherein the state conserves the health of the individual and supplies laboratories for the aid of the rural practitioner and encourages county and community hospitals.

While it would be ideal to have the care of the sick limited to the best trained individuals possible, at the same time we must recognize that the short cut to knowledge has always been taken and that there never has been a time when there have not been scores of cults for the cure of diseases by various fanciful processes. You know how short-lived they are, how quickly they give way one to another. Oliver Wendell Holmes once said, "So long as the body is affected through the mind, no audacious device, even of the most manifestly dishonest character, can fail of producing occasional good to those who yield it an implicit or even a partial faith. The argument founded on this occasional good, would be as applicable in justifying the counterfeiter and giving circulation to his base coin, on the ground that a spurious dollar had often relieved a poor man's necessities."

As the earlier teachings of the traditions of our ancient profession have been handed down from generation to generation by word of mouth, so the great accomplishments of present day medicine; the increasing span of human life; the mitigation of suffering; the inculcation of the laws of physiology; and the fundamentals of health, should be known about. We still have a burning message to deliver to our fellowmen just as we have the enormous responsibility of their protection against pestilence and their succor.

We should organize a society like this into a bureau of speakers to carry the message of prevention of illness and the great principles of human health and happiness to the people by word of mouth. Men who have the ability to impart this common knowledge of our profession should be asked to do so before civic clubs, in the pulpit, in the schools and colleges, and by radio under the auspices of the State Medical Societies. The knowledge which we have should be disseminated for the good of the individual and the community. (The truth about medicine is so wonderful and so glorious and so inspiring that it cannot fail to convince an indebted world when others are caught up with us in its splendor.)

Official Minutes of the 104th (59th) Annual Meeting of the Michigan State Medical Society Held in Mt. Clemens, Sept. 9-10-11, 1924

MINUTES OF THE COUNCIL

FIRST SESSION

1. The Council met in the Park Hotel, Mount Clemens, at 12 m., September 9th, 1924, with Chairman Jackson presiding and the following members present: Jackson, Stone, Clancy, Walker, Burke, Darling, Corbus, Baird, Bruce, Randall, LeFevre, Ricker, President Connor and Secretary-Editor Warnshuis.

2. The Chairman presented several recommendations that were pertinent and desirable for incorporation in the proposed new Constitution and By-Laws. After discussion, upon motion of Councilors Stone-Corbus, the Chairman was designated to act as the Spokesman of the Council and present these recommendations to the House of Delegates when that body took up in its order of business the revision of the Constitution and By-Laws. Carried.

3. On motion of Councilors Bruce-LeFevre the Secretary was directed to make a statement to the House of Delegates as to why an increase in annual dues was essential. Carried (See minutes of House of Delegates).

4. The annual report of the Council to the House of Delegates was presented by the Chairman, discussed and approved. See minutes of House of Delegates.)

SECOND SESSION

5. The Second Session of the Council was held at noon, September 10th, 1924. No business having been referred by the House of Delegates, no formal business was transacted.

THIRD SESSION

6. The Third Session of the Council was held at 1 p. m., September 11th, 1924, with Chairman Jackson presiding and the following Councilors present: Jackson, Bruce, Baird, LeFevre, Walker, Darling, Randall, Burke, Corbus, Stone, Ricker, Clancy, and the Secretary-Editor, Dr. Warnshuis.

7. Dr. Davy of Lansing, on behalf of the Ingham County Medical Society, presented an invitation to the State Society to hold its 1925 Session in Lansing.

8. Dr. LeFevre, on behalf of the Muskegon County Medical Society and the Chamber of Commerce, presented an invitation to hold our 1925 meeting in Muskegon.

9. On motion of Councilors Stone-Ricker, Muskegon was selected as the place for holding of our 1925 annual meeting. The date to be designated by the Chairman. Carried.

10. The Secretary called to the attention of the Council to certain provisions now effective by reason of the adoption of a revised Constitution and By-Laws by the House of Delegates.

11. On motion of Councilors Stone-Walker, the Secretary was instructed to carry out his outline of a plan of education regarding proposed new activities to be undertaken by the State Society. Carried.

12. On motion of Councilors Corbus-Randall an Executive Committee of the Council was created, composed of the Chairman, Secretary and Chairman of the Council's Committees on County Societies, Finance and Publication. Carried.

13. The Secretary outlined a plan and activity for a full-time Executive Secretary. On motion of Councilors Stone-Bruce, the Chairman and Secretary were authorized to interview possible candidates and report their findings at a future meeting of the Council. Carried.

14. On motion of Councilors Darling-Baird, the Secretary was instructed to pay the actual expenses only of one section guest and of Dr. Libman. Carried.

15. On motion of Councilors Ricker-Baird, the Committee on County Societies was instructed to prepare a plan for the holding of district and county clinics and the Secretary was authorized to secure the co-operation of the American Medical Association. Carried.

16. On motion of Councilors Stone-Burke, Councilor J. B. Jackson was elected Chairman of the Council for the ensuing year. Carried.

17. On motion of Councilors Randall-Ricker, Councilor Stone was elected Vice-Chairman of the Council for the ensuing year. Carried.

18. On motion of Councilors LeFevre-Burke, Battle Creek was designated as the place for holding the January, 1925, Session of the Council. The date and hour to be designated by the Chairman. Carried.

19. On motion of Councilors Baird and Burke, Council adjourned.

(Attest:) F. C. WARNSHUIS,
Secretary.

GENERAL SESSION

FIRST SESSION

The first General Session of the Fifty-Ninth Annual Meeting of the Michigan State Medical Society was called to order in the Bijou

Theatre, Mount Clemens, at 9:45 a. m., Wednesday, September 10, 1924, by the President, Dr. Guy L. Connor, Detroit.

INVOCATION

Rev. D. H. Ramsdell, D. D., Methodist Church, Mt. Clemens

Almighty God, our heavenly Father, Thou art the author of our being and the giver of our life. Thou has made us and not we ourselves. In Thee we move and live and have our very being. We would acknowledge Thee this hour and give Thee the thanksgiving and praise that are due Thy name. We thank Thee for this marvelous age in which we live, for the great advancement and increasing knowledge in every field. We thank Thee, our Father, for the agents that are working for the benefits of mankind. We thank Thee for the schools that are training our men. We Thank Thee for these sources of knowledge that are open to us. We Thank Thee for religion and for the churches which are seeking to develop the moral and spiritual side of our nature, and this morning we very especially thank Thee for the science and practice of medicine and surgery. We Thank Thee for these men and women who have consecrated themselves to the holy calling of healing. We thank Thee for their continually seeking to destroy our ills and conquer disease and free humanity from this bondage.

We thank Thee for that character who is so well known among our people, the family physician. We thank Thee for the relations of confidence and mutual respect existing between him and the families. We thank Thee, Oh God, for the sympathy and health which have come to the family through the family physician, and this morning, our Father, we thank Thee for the extraordinary advancement which has been made by the development of medical science in recent years. We thank Thee for the fields where they have conquered so largely, that the diseases which have been a scourge of humanity have been driven from the field. We ask Thee to help them to further conquest in these fields. We pray Thee that Thou wilt enlighten these great students and great investigators as they proceed along these lines, until the time may come when all these things may be driven from the field and when these medical practitioners shall have only to keep Thy people in health and condition.

Let Thy blessing rest upon this State gathering, in the discussions of the papers that are read, and we pray that out of this meeting may come new light and inspiration, and that these men and women may go back to their fields feeling a new sense of their high and noble calling. We ask Thy blessing upon this gathering, and that out of it may come good to the profession, great good to the profession and to humanity. In the Master's name we ask Thy blessing. Amen.

ADDRESS OF WELCOME

E. G. Folsom, M. D., President Macomb County Medical Society.

Mr. President, Members of the State Medical Society and Friends: To me has been given the pleasure of offering to you the hospitality of our hearts, of our city and of our Council. It is always an inspiration to any one to look into the faces of men and women who are working along the same lines of thought and endeavor. Men and women who are endeavoring to lengthen out the span of human life, and to save humanity from any more suffering than is necessary. Through all the centuries that have passed men have gathered together in convention, as well as by individual endeavor, to accomplish this result. It is possible that out of this convention some thought, some ideal, some new thing may come which shall further the end of making human suffering less. May it be so.

So far as we are concerned in Mount Clemens, we are like the rest of you in your home environment—we are proud of some things here. We are proud of our million dollar high school, of our St. Joseph's Sanitarium, which has served the public for twenty-five years, and for its new addition which will be ready in January. We are proud that we have in our immediate vicinity what the flyers call "the best aviation field in the United States." We are proud of these many things, just as you are proud of your home environment.

We have one thing here that you have not, and that is the mineral water which is used in the Mount Clemens baths. You can see by your badge that we all swear by the tub. This bathing business began about fifty years ago and I have watched this development for forty years. A careful estimate shows that there is a sum of about five million dollars invested in bathhouses and hotels that surround this bathing business. I do not know what to call this activity—whether it is a bathing business or not, but one cannot call it an institution because it has no institutional head. It is an industry. The peculiar thing about the industry is that it has never had a professional head. There has never been a trained physician in charge of this industry. It has grown from a bathhouse large enough to hold one tub to ten baths. In the month of August just passed a study of the day book of these different bathhouses shows that there was given 60,400 mineral baths. That will give you an idea of the extent of the industry. It is a thing for the people and by the people, and whether we advise our people to come here or not they come. The physicians of Mount Clemens feel that the other physicians should know more than they do about this industry which has made us what we are. The bathhouses are all open to you for inspection and for free baths while you are here. Personally, I look upon mineral baths as a luxury. They cure people whether our medicine does or not, and they come here, and keep coming. What is shown in August is shown in larger or smaller degree in every month of the year. We ask you to investigate as much as you can while you are here the quality of these baths for Mount Clemens has thrived for fifty years on this industry. As I suggested before, no

physician has one dollar invested. It is by the people and for the people, and we feel that something should be done to put these baths on a more scientific basis, that the people who come may be better advised as to what kind of a bath to take and when to take it, and we wish you to look into them as well as you can so that you may instruct your people as to what is best to do when they come here. We hope you will take baths while here. (Laughter and applause.) I need not say anything further. I only wish to say that we are glad you are here because you are what you are, physicians, and we welcome you. (Applause.)

RESPONSE

President Connor:

Dr. Folsom, Members of the Society and Friends: On behalf of the Michigan State Medical Society I wish to thank you and the members of the Macomb County Medical Society for your cordial welcome. I am sure we will all take away with us the memory of a most interesting and instructive program.

We are fortunate in having with us the Secretary of the American College of Surgeons, Dr. Franklin H. Martin of Chicago, who will now speak to you for a few moments. (Applause.)

DR. MARTIN: Members of the Michigan State Medical Society, Ladies and Gentlemen:

Not as the Director-General of the American College of Surgeons and not as an associate in wartime activities in which you all aided so splendidly, but as a member of the great American Medical Association, and a friend of our old chief, Surgeon-General Gorgas, do I come before you.

We are planning to establish a memorial for our former chief, not of marble or bronze, but a permanent, living organization in the form of a great health guild that will unite laymen and doctors in a concentrated effort to obtain better personal health—a guild that will be supported and directed by the representatives of curative medicine.

In the United States today there is scarcely a community that has not its quota of irregular "medical practitioners" (so-called). In many states there are strong organizations of the representatives of these various cults whose theories are imposed upon an uninformed public. The responsibility for this condition is largely due to the indifference of the scientific medical profession whose professional reticence has encouraged the growth of unscientific methods. If the profession is to maintain the high standing to which centuries of labor in behalf of suffering mankind entitled it, it is essential that a definite organized effort be made to familiarize the public with the facts regarding medicine's contributions to human welfare and the necessity for a close co-operation between the doctor and the public to insure a continuation of progress.

This is one of the objects of the Gorgas Memorial, namely; to furnish a channel through which proper health information may be disseminated to the public. It cannot be done by individual physicians. It must be conducted by a dignified, ethical organization, controlled by the medical profession. The name of Gorgas is synonymous with "Better Health." No more appropriate name could be adopted for a movement that has for its object the development of co-operation between the public and scientific medicine for the purpose of improving health conditions.

Before we go to the public with an appeal for financial and moral support, the doctors of the country must unite in support of this program. To accomplish this, Committees are now in process of organization, consisting of 100 to every 1,000,000 population in each state. Seventy-five per cent of each Committee will consist of medical men and the other 2 per cent of prominent and influential laymen and women. The affairs of the organization will be conducted by these Committees in co-operation with the national executive Committee.

As you can appreciate, no organization can operate without funds. We are endeavoring to raise an endowment of $5,000,000, the interest of which will be utilized in carrying on the work of the organization. The principal will be invested in trust securities and remain intact. Those invited to serve as Founder members of the State Governing Committees are requested to make a contribution of $100.00 to the Endowment Fund.

The American Medical Association at its recent meeting in Chicago, passed the following resolution:

"Resolved, That the House of Delegates of the American Medical Association, convinced of the great promise which the Gorgas Memorial contains of benefit to humanity through improved knowledge of preventive medicine and tropical disease, and of its peculiar adequacy, as a tribute to our great leader and sanitarian, recommend to the organized profession of the country, through its constituent state and county societies, the enthusiastic support of the project."

(Signed),
J. A. Witherspoon, Tennessee,
Joseph Rilus Eastman, Indiana,
Thomas Cullen, Maryland,
W. H. Mayer, Pennsylvania,
F. B. Lund, Massachusetts.

The Memorial program has also been endorsed by the State and County Societies and various civic organizations.

Shortly after the Presidential election this year, a national publicity campaign will be launched along the following lines:

1. A "Gorgas" paragraph will appear daily simultaneously in all the newspapers of the country, over a certain specified period, consisting of articles on health topics, written by well known specialists and prominent law writers interested in better health movements. These paragraphs will be accompanied by news items pertaining to the local Committee activities and brief paragraphs on Gorgas written by distinguished individuals who were his personal friends.

2. Health articles will appear in the general magazines and in the medical journals.

3. Radio talks on general health topics will be broadcasted at frequent intervals.

4. A general dissemination of information featurning the interesting achievements of scientific medicine as opposed to the existing propaganda of cults and quackery.

Encouragement of periodic health examination by the family physician at least once a year, stressing the fact that these examinations be conducted by the family doctor rather than by stock companies employing salaried physicians for the purpose.

This is one foundation controlled by the practitioners of curative medicine and as such should

be supported by every member of this Society. Let us pull together, the "doctor for the doctor." (Applause).

Dr. W. T. Dodge, Big Rapids, moved that the subject matter of this address be referred to the Council for respectful consideration.

Motion seconded and carried.

ANNOUNCEMENTS

Committee on Arrangements

Dr. V. H. Wolfson, Mount Clemens, announced the plans which had been made for the entertainment of the Society and suggested interesting places to visit.

Report of House of Delegates

Dr. F. C. Warnshuis, Grand Rapids, presented a brief report of the meeting of the House of Delegates, and introduced the President-Elect of the American Medical Association, Dr. William D. Haggard of Nashville, Tennessee.

PRESDENT'S ANNUAL ADDRESS

Dr. W. T. Dodge, Big Rapids, took the Chair and introduced the President, Dr. Guy L. Connor, Detroit, who delivered the Presidential Address. (See original articles.)

At the close of his address Dr. Connor paid the following tribute to Dr. Beverly D. Harrison:

If I am liking you a heap;
Come out an' tell you so;
If I'm your friend, no use to
Keep it hid—you want to know!
Don't wait until he's dead an' gone,
To say how fine he's been;
Don't wait to put your posies on
His grave—instead o' him.

We have with us today the man who was elected President of this Society twenty years ago.

We have with us today the man who wrote the Chandler Act and all of its amendments, save one.

We have with us today the man who originated and carried through reciprocal medical relations between states.

We have with us today the man who has been the only Secretary that the Michigan State Board of Registration in Medicine has ever had in its twenty-five years of existence.

We have with us today the man who has been the "watch-dog" of the Board—always fair, always honest, and always efficient.

We have with us today the man who is known from the Atlantic to the Pacific as the foremost authority in all matters pertaining to medical licensure.

Dr. Beverly D. Harison, I feel that the medical profession of this country owes you a great deal. (Prolonged applause.)

President Connor then resumed the Chair and introduced to the Society Professor, W. D. Henderson of the University of Michigan, Ann Arbor, who delivered an address entitled, "Science and Superstition."

(To be published in Original Articles.)

NOMINATIONS FOR PRESIDENT

DR. CARL MOLL, Flint: Mr. President, Ladies and Gentlemen: I have looked forward to this moment with the keenest anticipation. I know of nothing that will ever give me greater pleasure than placing in nomination for President of the Michigan State Medical Society the name of my old-time neighbor and colleague, Dr. William K. West, of Houghton County. I have known and admired Dr. West for a quarter of a century. For you who may not have had the pleasure of his kind hospitality and friendship and have not an appreciation of his keen intellect and respect for his professional ability, I will briefly outline some of the outstanding high-lights.

Dr. West was born in Missouri in 1866 and was graduated from the Detroit College of Medicine in 1889. He served an internship in St. Mary's Hospital and afterward became associated with the medical staff of the Calumet and Hecla Hospital. He served well and attracted the attention of the officials of the Copper Mining Company, who tendered him the position of Chief Surgeon of their interests, which positon he still ably holds.

Dr. West spent considerable time in postgraduate work at John Hopkins. He is also actively identified with County, State and National Associations. He is a charter member and was the first Secretary of the Houghton County Medical Society, afterward becoming its President. He was a delegate to the American Medical Association and about twenty years ago, in 1900, I believe, was Secretary of the Section on Surgery. He served ably and well on various committees. Only last year he did credit to himself and the Upper Peninsula Society by being its President.

It is very obvious that these activities have fitted him to assume the duties of President of the Michigan State Medical Society, and you cannot do greater honor to yourselves than by conferring upon Dr. West the greatest gift at your command. (Applause).

DR. ANGUS McLEAN, Detroit: I do not know that I can add anything to these remarks. Some of us are informed that Dr. West had been promised this last year. I am not the hero of prenomination promises, because you do not know what the other fellow has to offer.

I am not here to nominate a gentleman who ever sought office, but I am going to nominate a gentleman who has a long and honorable career in the practice of medicine. By that I mean the actual part of coming into contact with people. Professor Henderson, in his address, spoke about the two sides of life, the machine side and the human side. This President, I would say, is the machine side—I will take the human side. The machine side is that referred to by the Speaker who said he went around it three times to find out what the trouble was. The gentleman I am going to nominate is not that type. He goes to the home and examines the person and extends the hand of human kindness. That hand does not rest there, it extends to the whole of humanity. He does not believe that all our medicine should be controlled by the state. He believes in the plain practice of medicine and I am sure that if he is elected President of htis Society, the plain practitioner of plain human medicine will be brought to a high plane.

I am sure the Society will do itself honor in electing him, and I have the pleasure of presenting to you the name of Dr. Charles C. Clancy, of Port Huron. (Applause).

Dr. FREDERICK W. ROBBINS, Detroit: I wish I had the ability to come before this body and present what I have to say in that delicate, sweet manner which Dr. McLean has already offered: I come to second the nominaton of Dr. West. I have been asked in the last few weeks very often to use what little influence I have for the election of some man, but it is not easy to do because I know nothing about the man except that he wanted the position, but when I come here to use what little influence I have to make Dr. West the President of this Society I do not do it because I was requested to do so, but because of what I know of Dr. West. I do not think that the Sons of the American Revolution should be classed above those who are not Sons of the American Revolution, but I do wish to say that Dr. West came under the supervision and careful training of our old friend, Dr. McGraw, and I think obtained splendid knowledge and many of those excellent principles which many of you remember as having been the possession of Dr. McGraw. Dr. West, during the later stages in the last century, under the training of Dr. McGraw, was put somewhat under my tutelage. Indeed, I slept with him and taught him how to smoke. You should have seen him the first time he smoked. (Laughter). I knew Dr. West so thoroughly in my office in Detroit that I came thoroughly to appreciate the strength of his character and the possibilities of his future development. I am sure he will make an excellent President, if elected. (Applause).

DR. EDW. SAWBRIDGE, Stephenson: I consider it an honor to second the nomination of Dr. West for President. I have known Dr. West intimately for thirty-five years. No man in the Upper Peninsula stands higher as a man and a physician, and no one has done more for the profession than has Dr. West. You gentlemen will make no mistake if you elect him. (Applause).

DR. CHARLES B. STOCKWELL, Port Huron: I rise to second the nomination of Dr. Clancy, of Port Huron. Being associated with him for many years, I have learned to have the very highest appreciaton of his ability and of his work in the state, in both civic and medical matters, in our locality. He is always in the van of every good work. He has the training for the position for which we wish his nomination. There is only one thing against him—you may say he is Irish, but not of the Donnybrook-Fair style. He does not go about with his coat tails trailing, daring some one to step on them so that he may wield his shillalah, but he has a kind sense of humor which endears him to his patients and especially to his friends. No man is more highly thought of in our community than Dr. Clancy. No word could you ever hear of criticism or condemnation, nothing but the highest words of praise and honor. We would consider it an honor to us if you will honor him, for we all love him. (Applause).

Dr. W. J. O.REILLY, Saginaw: I think no one in this audience will question the loyalty of Dr. West, but whatever the profession has won in his State is not due to any one man. There is no one man who has first claim to any office in this organization. From long association and friendship I have grown to love and honor my friend, Charlie Clancy. During a long period you have come to honor the best man of the State, you desire the men of the highest executive ability, and if you elect Dr. Clancy you will have such a man. I deem it a great privilege to support Dr. Clancy.

DR. A. W. HORNBOGEN, Marquette: I am out for Dr. West, I admit that, and I think every man here will say that the Upper Peninsula should at some time in its existence receive the highest honor within your gift, and that is the presidency of the State Medical Society. In the fifty or sixty or seventy-five years that you have been in existence, we have had the honor twice. The late lamented Dr. Lawbaugh was President once and your humble servant on another occasion. I think you should all consider that the Upper Peninsula in presenting a man as able as Dr. West will have to draw upon you for the vote, because we have very few.

Another point, I consider really that Dr. Clancy, a man whom I admire in many respects, presents one reason why he cannot be a candidate, and that's because he is a Councilor at present. I respectfully ask a ruling from the Chair on this matter.

THE PRESIDENT: One correction regarding your statement, Dr. Hornbogen. We have had three presidents from the Upper Peninsula and the third was Dr. Harrison.

Regarding the other matter, I would rule that unless Dr. Clancy has resigned from the Council he will not be eligible for the presidency. If he has resigned, all well and good. I may be wrong about this and the other side may take an appeal from my decision if they wish. Do you know, Dr. McLean, whether Dr. Clancy has resigned?

DR. McLEAN: Dr. Clancy, I think, has not resigned, because he has not been looking for this. This is simply some of his friends trying to get him to take it, but I presume he can comply with the request.

DR. W. J. O'RIELLY, Saginaw: There is nothing in the Constitution and By-Laws which prohibits any man holding two offices in the gift of the organization.

THE PRESIDENT: Is that correct, Mr. Secretary?

THE SECRETARY: There is nothing that I know of to prevent Dr. Clancy being a candidate.

THE PRESIDENT: Then I will change my ruling, and state that Dr. Clancy is eligible under the new Constituton and By-Laws. Are there any further nominations?

DR. BEVERLY D. HARRISON, Detroit: I am naturally interested in the Upper Peninsula, having practised there for many years, and I knew Dr. West then and have known him since. He has always been one of the foremost men in the State and does his duty toward the Society in all circumstances. When I was elected president I think it was largely because the man nominated against me had not resigned. I do not know what the Constitution provides for, but I know that some two years ago it was generally accepted throughout the State that it was the turn of the Upper Peninsula to be represented in the presidential chair. These two years have gone by and I think it is only fair to the Upper Peninsula that it receive the nomination this year.

DR. ALEXANDER J. MacKENZIE, Port Huron: I wish to second the nomination of Dr. Clancy in very few words. 'Tis true he is an Irishman, but he never kissed the blarney stone. He is a man of keen wit, keen judgment, and if he is made president of the Society you will honor and like him. He will ever support the work of the humblest practitioner on the dirtiest crossroads in Michigan.

On motion duly seconded and carried the nominations for President were closed.

The Secretary announced that arrangements for a ballot box would be made immediately and that all members who had registered at this meeting were entitled to vote.

On motion duly seconded and carried the First General Session was declared adjourned.

SECOND GENERAL SESSION

The Second General Session of the Fifty-Ninth Annual Meeting of the Michigan State Medical Society was called to order in the Bijou Theatre, Mount Clemens, at 7:40 p. m., Wednesday, September 10, 1924, by the President, Dr. Guy L. Connor, Detroit.

Dr. Connor then introduced Dr. George L. LeFevre, President of the State Board of Registration, Muskegon, who addressed the Society on "Our Hospital Obligations."

(See Original Articles.)

Dr. Connor next introduced the President-Elect of the American Medical Association, Dr. William D. Haggard of Nashville, Tennessee, who spoke on "The Profession's Relation to the Public."

DR. HAGGARD: It is a very great privilege, perhaps the greatest privilege, of the President of the American Medical Association to visit in a somewhat official capacity the various Societies of the country, of which we think the Michigan State is one of the greatest. I have for a long time been familiar with the great men produced by this State, and I am not unmindful of the fact that there is none greater than the distinguished father of your President, than whom there was no greater in the State of Michigan. I disagree with the statement that has been made that Michigan has not done its entire duty and furnished its complete quota to the American Medical Association. You have a very excellent Journal and you have a very live, and one of the best beloved Secretaries that any State has. (Applause.) If I might tell an inside secret I might say that if the American Medical Association had its way we would be very happy to wean him away from you and give him to the national society for all time to come.

There was a time in Tennessee when we would rather have seen his Satanic Majesty himself than a man from Michigan, during those years from sixty-one to sixty-five, but we have come to know you better now, having fought through two wars with you and found you excellent buddies. I think the fact that your coach and our coach at Vanderbilt married two Tennessee sisters may have something to do with this, and we feel very proud, sir, when the Michigan football team comes to Tennessee and is so generous as not to score against Vanderbilt. (Laughter and applause.)

I believe it was the same when one of the students at Vanderbilt was being examined in medicine and was asked among other things, "What is typhoid fever, and how would you prevent it?" He answered that all right and the next thing was, "What is smallpox, and what would you do for it?" He answered that all right, and then came, "What is rabies, and what would you do for it?" and his answer to that was, "Rabbis are Jewish preachers and I wouldn't do a damned thing for them." (Laughter and applause.)

I wish to take up something that seems to me of very great importance in our professional life, because after all it is not in the laboratory, not in the sick-room and at the bedside alone that we must do our work, but to the public and for the public that we must do our work, and that our great work must be done, and I will, with your permission, sir, dwell on just a few of them.

(See Original Articles.)

Dr. Connor thanked Dr. Haggard on behalf of the Society for his very delightful and interesting address, and upon motion duly seconded and carried, declared the meeting adjourned.

THIRD GENERAL SESSION

The Third General Session of the Fifty-Ninth Annual Meeting of the Michigan State Medical Society was called to order in the Bijou Theatre, Mount Clemens, at 1:40 p. m., Thursday, September 11, 1924, by the President, Dr. Guy L. Connor, Detroit.

REPORT FROM HOUSE OF DELEGATES

Dr. F. C. Warnshuis, Secretary, reported that the count of the ballot for President had resulted in the election of Dr. Charles C. Clancy of Port Huron, Dr. Clancy having received 181 votes and Dr. West, 117.

Dr. Connor then declared Dr. Clancy duly elected President for the ensuing year, and requested Dr. Folsom of Mount Clemens, and Dr. Dodge of Big Rapids, to conduct Dr. Clancy to the platform.

DR. CONNOR: It gives me unusual pleasure to stand up here and present Dr. Clancy to you. (Prolonged applause.)

DR. CLANCY: I presume it would be but following the presidents of the past if I were first to express my appreciation at the honor of being elected President of the Michigan State Medical Society. I acknowledge that honor and, naturally, I appreciate it as any physician would. I appreciate the fact of being selected for this office, but I want to say to you that aside from all that my mind is more or less filled—sometimes rather painfully filled, with a realization of what this office demands of its occupancy. The presidency of the Society I take it, ladies and gentlemen, is not that one

simply may serve and appear as a hook upon which an honor has been placed, an attempt to live in the sunshine of idleness and uninterest in the affairs of the Medical Society of this State. I believe it demands hard work. I believe it demands time, a lot of expenditure of time during the term of office, and if that office is to be of any service to you, then you must assist the President in his endeavor to carry out your wishes. I cannot meet the requirements—I am quite unable to make the administration of the coming year a success unless I am supported by your hands, and I ask of all of you, of all the physicians in the State of Michigan, a kindly interest in my, perhaps faltering, efforts—I do not know, but in the work that I am trying to do I ask for your earnest and kindly assistance in every way and I trust that when I appeal to you either individually or in groups for assistance and for direction, for counsel, you will not hesitate to grant it to me. If any success should come to the administration that we are now beginning it is important, not to me alone, but to all the members of the Society, and I hope you will each take it as a personal matter. I promise to do that which I can to promote the interests of the Michigan State Medical Society, and I ask your assistance. (Prolonged applause.)

The Third General Session of the Michigan State Medical Society, so far as I know, has completed its work as a general session, but a wonderful scientific program is to be put on this afternoon. This program is a splendid exposition, and unless there is some objection I will declare the General Session of the Michigan State Medical Society adjourned and ask that the scientific session be taken up. I will request Dr. B. N. Colver of Battle Creek to preside over the scientific session.

DR. B. N. COLVER, Battle Creek: When the officers of the various sections and the Secretary of the State Society met in Kalamazoo last spring to discuss plans for this meeting someone suggested that it might be well to have the plan rather reversed and have a general meeting of general interest in the afternoon of the last day. This plan was adopted and we have attempted to put on something of interest to the men in every section. A committee was appointed and we looked over the field of the United States to see whom we could get to give us something of that nature. There were a number of internists in the United States who were unanimous in recommending to us Dr. Emanuel Libman of New York City as a speaker of international reputation, one who would bring to us something of interest to all. We have been very happy in securing him and have asked each of the sections to select a man to respond to his discussion of "General Infections by Bacteria." I take much pleasure in introducing to you Dr. Emanuel Libman. (Applause.)

(Abstract of Dr. Libman's address to be published.)

PROCEEDINGS OF THE HOUSE OF DELEGATES

The first session of the House of Delegates of the Fifty-Ninth Annual Meeting of the Michigan State Medical Society was called to order in the Methodist Church, Mount Clemens, at 2 p. m., on Tuesday, September 9, 1924, by the Speaker, Dr. Carl Moll, Flint.

ROLL CALL

Dr. Henry Cook, Chairman of the Credential Committee, stated that Dr. Welsh wished to take the place of Dr. A. V. Wenger of Grand Rapids, but had no credentials. That Dr. W. J. O'Reilly, Saginaw, had not brought his credentials, although he was duly listed in the program as a Delegate to the House. That Dr. W. C. Garvin of Tuscola County had the credentials of another man, who had transferred them personally to Dr. Garvin.

The Secretary said that he held in his hand the signed roll call of thirty-two Delegates, and moved that this constitute the roll call for this meeting. Seconded and carried.

ROLL CALL—HOUSE OF DELEGATES—THREE SESSIONS

Doctors G. C. Nicks, Jackson County; D. Emmett Welsh, Kent County; Walter Den Bleyker, Kalamazoo County; W. J. O'Reilly, Saginaw County; John A. Messinger, Washtenaw County; H. D. Barss, Washtenaw County; A. D. Wickett, Washtenaw County; H. M. Malejan, Wayne County; J. A. Kimzey, Wayne County; G. A. Hafford, Calhoun County: Harlen Mac Mullen, Manistee County; L. W. Toles, Ingham County; Robert C. Moehlig, Wayne County; J. Hamilton Charters, Wayne County: Harry F. Dibble, Wayne County; E. G. Martin, Wayne County; John B. Rieger, Wayne County; C. Heffron, Lenawee County; Charles T. Southworth, Monroe County; E. B. Minor, Leelanau County; Frank C. Starkey, Wayne County; H. B. Garner, Wayne County; Hugh A. Stewart, Genesee County; W. T. Dodge, Mecosta County; L. J. Crum, Kalamazoo County; C. S. Gorsline, Calhoun County; J. D. Brooks, Kent County; H. R. Carstens, Wayne County; T. S. Buesser, Wayne County; J. H. Dempster, Wayne County; Alex J. MacKenzie, St. Clair County; B. N. Davey, Ingham County; Henry Cook, Genesee County; J. C. Benson, Genesee County; W. Elwood Tew, Gogebic County; Harry E. Shaver, Antrim, Charlevoix, Emmett Counties; W. C. Garvin, Tuscola County; A. W. Hornbogen, Marquette, Alger Counties; Lewis W. Knapp, Genesee County; W. C. Garoni, Tuscola County; J. F. Pinkham, Ionia-Montcalm Counties; John B. Rieger, Wayne County; G. H. Southwick, Kent County; J. Emmett King, Wayne County; D. J. O'Brien, Lapeer County; Charles F. DuBois, Gratiot-Isabella Clare Counties; Charles F. Kuhn, Wayne County.—47.

The Speaker then announced that a quorum was present and declared the House duly constituted for the transaction of business.

Dr. C. T. Southworth, Monroe, moved that Dr. O'Reilly be seated as a Delegate from Saginaw County.

Motion seconded and carried.

Dr. J. D. Brook, Grandville, moved that Dr. D. E. Welsh be seated as a Delegate from Kent County.

Motion seconded and carried.

Dr. A. W. Hornbogen, Marquette, moved

that Dr. William E. Tew of Bessemer, be seated as Delegate from Gogebic.

Motion seconded and carried.

Dr. C. T. Southworth, Monroe, moved that Dr. Garvin of Millington be seated as a Delegate from Tuscola County.

Motion seconded and carried.

SPEAKER'S ADDRESS

Speaker Moll then requested the Vice-Speaker, Dr. Joseph E. King, to take the Chair, while he delivered the Speaker's Address.

This address was automatically referred to the Business Committee.

PRESIDENT'S REMARKS

Mr. Speaker, Members of the House: This is the first time I have stood before you. I have always sat on a seat among you and listened to the other presidents' rather long talks. I have nothing special to give you. Your program is rather heavy, not only with the usual routine, which is usually enough to take care of, but in addition this year you have to act on the new Constitution and By-Laws, whether you accept, or reject, or modify the form that has been presented.

I will not detain you any longer, but give you a chance to get down to business at once. (Applause.)

APPOINTMENT OF BUSINESS COMMITTEE

The Secretary stated that the Speaker had appointed the following gentlemen to constitute the Business Committee:

Dr. W. T. Dodge, Big Rapids.
Dr. L. W. Toles, Lansing.
Dr. E. B. Minor, Traverse City.
Dr. C. T. Southworth, Monroe.
Dr. H. A. Luce, Detroit

ELECTION OF NOMINATING COMMITTEE

The following gentlemen were duly nominated and balloted upon:

Dr. A. W. Hornbogen, Marquette.
Dr. J. Benson, Flint.
Dr. J. D. Brook, Grandville.
Dr. H. F. Dibble, Detroit.
Dr. G. A. Hafford, Albion.
Dr. W. C. Garvin, Millington.
Dr. J. H. Charters, Detroit.

The Speaker appointed the following gentlemen to act as Tellers:

Dr. Harry Malejan, Detroit.
Dr. J. A. Kimzey, Detroit.
Dr. C. S. Gorsline, Battle Creek.

After the ballot was counted Dr. Kimzey announced that the following five gentlemen had been duly elected as the Nominating Committee:

Dr. A. W. Hornbogen, Marquette.
Dr. J. D. Brook, Grandville.
Dr. H. F. Dibble, Detroit.
Dr. J. Benson, Flint.
Dr. W. C. Garvin, Millington.

REPORT OF COMMITTEE ON REVISION OF THE CONSTITUTION AND BY-LAWS

Dr. O'Reilly, Saginaw, moved that the Constitution and By-Laws be taken up, article by article, and that each article be read in full and passed upon before proceeding with the next.

Motion supported and carried.

The Speaker ruled that no delegate would be allowed more than two minutes to discuss each article, and that no delegate could discuss the same article a second time.

Dr. J. G. R. Manwaring, Chairman of the Committee, stated that he had been away for several weeks and for that reason had not been able to reply to several communications which had been sent him regarding the revision, and then proceeded with the reading of the Constitution.

Article 1: Adopted as read.

Article II: Dr. J. B. Jackson, Chairman of the Council, stated that the Council had spent considerable time in a consideration of the proposed revision of the Constitution and By-Laws, and on behalf of the Council he offered the following substitute for Article II, and moved that it be accepted:

"The objects of the Association are to promote the science and art of medicine and the betterment of public health."

Dr. Jackson's amendment was supported and upon a rising vote of the House was carried.

Article III: Section 1—Upon motion duly seconded and carried the word "Council," was substituted for the words "House of Delegates" in the last line of this Section.

Article IV. Section 1—Upon motion duly seconded and carried the word "Delegates" was stricken out, this Section to read, "This Society shall consist of members and honorary members."

Section 2—Upon motion duly seconded and carried the words, "citizens of the United States" and the last sentence of Section 2 were stricken out, this Section to read, "The membership of this Society shall consist of members in good standing in the component County Medical Societies whose annual assessments to this Society have been paid."

Section 3—Upon motion duly seconded and carried this Section was stricken out, the following Sections to be automatically renumbered.

Section 4—Upon motion duly seconded and carried this Section was stricken out and the following substitute was unanimously adopted:

"Only members in good standing shall participate in the deliberations and activities of the annual meeting."

Section 5—Adopted as read.

Section 6—Upon motion duly seconded and carried the words "seats and" in the fourth line were stricken out, this Section to read, "Delegates to this Society from any State Society entitled to representation in the American Medical Association shall, by presenting certificates of delegation duly signed, be entitled to participate in the scientific work of this Society. They shall not be entitled to vote, to hold office, nor be eligible to membership."

Section 7—Adopted as read.

Section 8—Adopted as read.

Section 9—Adopted as read.

Section 10—Adopted as read.

Article V: Section 1—Upon motion duly seconded and carried the last clause of the last sentence was stricken out, this Section to read, "The

legislative powers of the Society shall reside in the House of Delegates. The House of Delegates shall transact all the business of the Society not otherwise specifically provided for in this Constitution and By-Laws and shall elect the general officers excepting the President. The House of Delegates shall adopt rules and regulations for its own government and for the administration of the affairs of the Society."

Section 2—Adopted as read.

Section 3—Adopted as read.

Section 4—Adopted as read.

Article VI: Section 1—Upon motion duly seconded and carried the words "House of Delegates" were stricken out and the word "Council" substituted, this Section to read, "The Society shall hold an annual meeting at such time, place and duration as the Council may determine. The sessions shall be open to all registered members, delegates and invited guests."

Section 2—Adopted as read.

Section 3—Adopted as read.

Article VII: Section 1—Adopted as read.

Section 2—Upon motion duly seconded and carried this Section was referred back to the Committee for further revision, to be reported at the next session of the House.

Section 3—Upon motion duly seconded and carried the second sentence was stricken out, this Section to read, "The officers of this Society shall be elected on the last day of the annual session. No person shall be elected to any such office who has not been a member of this Society for at least five years."

Section 4—Upon motion duly seconded and carried this Section was referred back to the Committee for further revision, to be reported at the next session of the House.

Article VIII: Section 1—Adopted as read.

Section 2—Adopted as read.

Section 3—Adopted as read.

Section 4—Adopted as read.

Article IX: Section 1—Upon motion duly seconded and carried this Section was stricken out and the following substitute was unanimously adopted:

"The Annual Membership dues shall be $10.00 per year, payable on or before April first of each year. Annual dues shall be remitted to the State Secretary through the office of the County Secretary wherein a member is affiliated."

Section 2—Upon motion duly seconded and carried this Section was stricken out and the following substitute was unanimously adopted:

"Funds of the Society shall only be disbursed on order or action of the Council, and disbursement of funds shall only be made by voucher signed by the Chairman of the Council, Secretary and Treasurer. No single officer. Councilor or Committee, shall have authorty to disburse any of the Society's funds."

Section 3—Adopted as read.

Section 4—Included as last clause of new Section 2.

Section 5—Upon motion duly seconded and carried this Section was stricken out.

Article X: Upon motion duly second and carried this article was stricken out, the following Articles to be automatically renumbered.

Article XI: Adopted as read.

Article XII: Adopted as read.

Article XIII: Section 1—Adopted as read.

Section 2—Adopted as read.

BY-LAWS

Chapter 1—Membership.

Section 1—Upon motion duly seconded and carried the words "at the option of the County Society" were added to the second paragraph, this second paragraph to read, "Any member in arrears for dues to the amount of one year or more may regain membership either by paying up all back dues or by being again elected to membership, at the option of the County Society."

Section 2 and 3—Upon motion duly seconded and carried these Sections were stricken out and the following substitute for Section 2 was adopted:

"Members shall register at each Annual Session."

Chapter II—General Meetings.

Section 1—Upon motion duly seconded and carried the words "one of the Vice-Presidents" were added to the last sentence, this Section to read, "The General Meetings shall include all registered members and delegates who shall have equal rights to participate in the proceedings and to vote on pending questions. Each General Meeting shall be presided over by the President or, in his absence, by one of the Vice-Presidents."

Section 2—Adopted as read.

Section 3—Adopted as read.

Chapter III—House of Delegates.

Section 1—Adopted as read.

Section 2—Adopted as read.

Section 3—Adopted as read.

Section 4—Adopted as read.

Section 5—Upon motion duly seconded and carried the second sentence was stricken out and the words "who shall be the Secretary of the State Society" were added to the first sentence, this Section to read, "The officers of the House of Delegates shall be Speaker, Vice-Speaker and Secretary, who shall be the Secretary of the State Society."

Section 6—Upon motion duly seconded and carried items (f), (h) and (i) were stricken out, and the words "appointed by the Speaker" were added to item (m), this item to read, "It shall have the following standing and business committees, appointed by the Speaker."

The other items of Section 6 were adopted as read.

Chapter IV—Sections.

Sections 1, 2, 3, 4, 5, 6, and 7 adopted as read.

Chapter V: Election of Officers.

Section 1, 2, and 3 were adopted as read.

Section 4—Upon motion duly seconded and carried the word "elected" was substituted for "appointed" in line 1, and the word "House" was substituted for "Speaker" in line 2, and the last sentence stricken out, this Section to read, "A nominating committee shall be elected by the House. The duty of this committee is to nominate candidates for the office of Vice-Presidents, Delegates and Alternates to the American Medical Association and all other officers that may be hereafter provided for. It shall report to the House of Delegates nominations for Councilors as made by the majority vote of the delegates from their respective districts."

Sections 5, 6 and 7 were adopted as read.

Chapter VI: Duties of Officers.

Sections 1, 2 and 3 were adopted as read.

Section 4—Upon motion duly seconded and carried the words "and the instructions of the House of Delegates and Council" were stricken out of item 8, this item to read, "He shall superintend the making of all arrangements for the holding of all meetings, in compliance with the Constitution and By-Laws."

Chapter VII: The Council.

Section 1—Adopted as read.

Section 2—Upon motion duly seconded and carried this Section was stricken out, the following Sections to be automatically renumbered.

Section 3—Upon motion duly seconded and carried the last sentence was stricken out, this Section to read, "Collectively, the Council shall be the Board of Censors of the Society. It shall consider all questions involving the right and standing of members, whether in relation to other members, to the component societies, or to this Society. All questions of an ethical nature brought before the House of Delegates or the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or of a County Society, upon which an appeal is taken from the decision of an individual Councilor."

Section 4—Upon motion duly seconded and carried, this Section was referred back to the Committee for further revision, to be reported at the next session of the House.

Section 5—Upon motion duly seconded and carried the words "and revoke same when necessary" were added, this Section to read, "It shall, upon application, provide and issue charters to County Societies organized in conformity with the spirit of this Constitution and By-Laws, and revoke same when necessary."

Section 6—Adopted as read.

Section 7—Adopted as read.

Section 8—Upon motion duly seconded and carried all but the first sentence was stricken out, this Section to read, "The Council shall approve the expenditure of the funds of the Society."

Section 9—Adopted as read.

Chapted VIII. Standing Committees' Duties.

Sections 1, 2 and 3 were adopted as read.

Section 4—Upon motion duly seconded and carried the words "or any similar organizations" were inserted in the last paragraph, this paragraph to read, "It shall be the duty of this committee to join with representatives of the Medical Department of the University of Michigan, Detroit College of Medicine and Surgery, Michigan State Anti-Tuberculosis Association, Michigan Association Welfare League, State Department of Health, Michigan State Dental Society, Michigan State Nurses' Association, or any similar organizations, for the purpose of carrying out an educational program to enlighten the public of Michigan in regard to scientific medicine."

Section 5—As this Section has not been revised in any way it was adopted without reading.

Chapter IX: Emergency. Adopted as read.

Chapter X: Annual Dues.

Upon motion duly seconded and carried the title of this Chapter was changed to "Members in Arrears."

Section 1.—Upon motion duly seconded and carried, this Section was stricken out.

Section 2—Adopted as read. Section 2 to become Section 1.

Chapter XI: County Societies.

Section 1—Upon motion duly seconded and carried the words "Code of Ethics" in line 5 were stricken out and the words "Principles of Medical Ethics" substituted, and the word "shall" in line 6 was stricken out and replaced by the word "will," this Section to read, "All County Societies now in affiliation with the State Society or those which may hereafter be organized in this State, which have adopted principles of organization not in conflict with this Constitution and By-Laws, or with the Principles of Medical Ethics of the American Medical Association, will upon application to the Council, receive a charter and become a component part of this Society, subject to the condition described in Section four of this Chapter. A roster of its officers and members and the annual assessment and subscription to the Journal for each member must accompany the application."

Section 2—Upon motion duly seconded and carried this Section was stricken out.

Section 3—Upon motion duly seconded and carried this Section was stricken out.

Section 4—Upon motion duly seconded and carried all except the first sentence was stricken out, this Section to read, "Only one component medical society shall be chartered in any county." Section 4 to become Section 2, the following Sections to be automatically renumbered.

Section 5—Upon motion duly seconded and carried the following sentence was inserted after the first sentence, "He may continue as a member providing he complies with the provisions of the Constitution and By-Laws of his State and County Medical Societies. In the event that his conduct, actions or professional labors reflect violation of said provisions, and in the event of failure on the part of a County Society to exercise disciplinary action upon him, the Council after due notice and hearing may cause his expulsion." This Section to read, "Each County Society shall be the judge of the qualifications of its own members; but, as such Societies are the only portals to this Society and to the American Medical Association, every reputable and legally registered practitioner of medicine shall be eligible to membership. He may continue as a member providing he complies with the provisions of the Constitution and By-Laws of his State and County Medical Societies. In the event that his conduct, actions or professional labors reflect violation of said provisions, and in the event of failure on the part of a County Society to exercise disciplinary action upon him, the Council after due notice and hearing may cause his expulsion. Before a charter is issued to any County Society, full and ample notice and opportunity shall be given to every eligible physician in the County to become a member."

Sections 5, 6, 7, 8, 9 and 10 were adopted as read

Section 11—Upon motion duly seconded and carried the words "in the fall, or at the first meeting after January first" in the first sentence, and the entire second sentence were stricken out, this Section to read, "At the annual meeting, due notice having been given, each County Society shall elect annually a Delegate and an Alternate to represent it in the House of Delegates of this Society. The Secretary of the County Society shall immediately send a list of its delegates to the Secretary of this Society."

Section 12—Adopted as read.

Chapter XII. Adopted as read.

Upon motion, duly seconded, the House of Delegates was adjourned until 7:15 p. m.

SECOND SESSION

The second session of the House of Delegates of the Fifty-Ninth Annual Meeting of the Michigan State Medical Society was called to order in the Methodist Church, Mount Clemens, at 7:30 p. m., on Tuesday, September 9, 1924, by the Speaker, Dr. Carl Moll, Flint.

ROLL CALL

The Secretary announced that he held in his hand the signed roll of a majority of the House of Delegates and moved that this constitute the roll call for the evening session. Seconded and carried.

The Speaker then announced that a quorum was present and declared the House duly constituted for the transaction of business.

UNFINISHED BUSINESS

Constitution and By-Laws: Dr. J. G. R. Manwaring, Flint, Chairman, submitted the following revision for Article VII., Section 2, of the Constitution:

"Section 2—The President and Vice-Presidents shall be elected for a term of one year. The Secretary-Editor and the Treasurer shall be elected by the Council at its annual meeting in January, and shall hold their offices for one year. The Councilors shall be elected for terms of five years each, providing that the members of the Present Council shall remain in office until their successors are elected, as follows:

"Councilors for Districts Nos. 1, 2 and 3 in 1925; for Districts Nos. 4, 5 and 6 in 1926; for Districts Nos. 7, 8 and 9 in 1927; for Districts Nos. 10, 11 and 12 in 1928, and for Districts Nos. 13 and 14 in 1929. Providing further that a Councilor for the 13th District shall be elected at this session of the House."

Dr. Manwaring explained that as there are fourteen Councilors by this plan three would retire each year, with the exception of one year when, necessarily, but two would retire.

Upon motion duly seconded and carried this Section was adopted as read.

Dr. Manwaring then submitted the following revision for Article VII., Section 4, of the Constitution:

"Section 4—Nominations for President shall be made from the floor of the first General Meeting. He shall be elected by a ballot of the majority present at the second General Meeting of the session. All nominations for Councilor shall be by a majority vote of the delegates from each respective district and shall be reported for election to the House of Delegates through the Committee on Nominations. The delegates from those districts electing Councilors shall be called together by the Secretary at the annual meeting for the purpose of nominating successors to those whose terms expire in that year."

Upon motion duly seconded and carried this Section was adopted as read.

Dr. Manwaring then presented the following, to be inserted as a new Section following Section 4 of Chapter VII of the By-Laws, as at present arranged, to be Section 4 under the new arrangement:

"Section 4—At each annual meeting the Councilors shall report to the House of Delegates the Medical Society work which has been done in their respective districts during the preceding year."

Upon motion duly seconded and carried this Section of the By-Laws was adopted as read.

Dr. O'Reilly,, Saginaw, moved that the Constitution and By-Laws as revised and adopted, section by section at this session of the House of Delegates, be adopted as a whole, and that the Secretary be instructed to correlate any disconnected sections and correct grammar where necessary.

Motion seconded by Dr. Hornbogen.

Dr. Crum, Kalamazoo, offered as an amendment to this motion that the Constitution and By-Laws be adopted as revised, with the exception that the yearly fee of $10.00 for each member be stated in the By-Laws instead of in the Constitution, so that if it should in the future become necessary to raise the annual dues this could be done without a year's notice, which is required by the Constitution. Seconded.

Dr. O'Reilly accepted this amendment and the motion, as amended, was put to a vote and unanimously carried.

ANNUAL REPORTS

Dr. Cowie, Ann Arbor, Chairman of the Advisory Committee of the Pediatric Section, presented the following report, which was automatically referred to the Business Committee.

ADVISORY COMMITTEE—

Pediatric Section

To The House of Delegates, Michigan State Medical Society:

The Advisory Committee of the Pediatric Section wishes to make a report on its year's work.

You will recall that at the last meeting we brought in a report on the progress of our work on goitre prevention to that time. We advocated the use of iodine salt. We asked of you and obtained from you permission to proceed with our work and to take up the question of the iodization of salt with the salt producers, and see if we could get their co-operation and whether they thought the plan feasible. The report of our transactions with the salt manufacturers, as you all know, has been published in the Journal.

The salt men heartily co-operated with the committee. Some of them became desirous of putting the salt on the market at an early date and also expressed a desire to have a certificate from the State Society that we had proposed. We informed them that we, as a committee, had no power to give a certificate. We took up the matter with our secretary who called for a referendum vote of the council which resulted unanimously in favor of the proposed certificate, whereupon we issued the following certificate with the understanding that it would continue in effect until the time of this meeting at which time the matter would be brought before the Society in session.

> *Approval Certificate* : This salt contains .01% sodium iodide, the amount approved by the council and advocated by the Pediatric section of the Michigan State Medical Society as a preventative of goitre.
>
> *"Individuals using this salt must not take other preparations of iodine without the advice of their physician."*
>
> "To be effective this salt must be used for cooking as well as for table use."

Having finished our first year's work and prior to obtaining permission from you to proceed with conferences with the salt producers, we presented our plan to Dr. Olin at the Pantlind Hotel. We now wished to report to him the success we had attained and discuss future plans. Accordingly we sought a conference with him. On March 21st we met with Dr. Olin in a joint meeting of our committee and Advisory Committee on Public Health of the Society in Dr. Olin's office at Lansing.

At this meeting we gave a detailed report of our activities. The following men were present, from our committee: Dr. Cowie, chairman; Dr. Miner, secretary of the committee; Dr. Larned, Dr. Levy, and Dr. Hale of Midland, who had been co-operating with us in the capacity of chemist. From the Advisory Committee on Public Health: Dr. Manwaring, chairman; Dr. Bruce; Dr. LaFevre; Dr. Campbell, and from the State Department of Health, Dr. Olin, commissioner; Dr. Kieffer; Dr. Gowdy; Dr. Slemons, and Judge Carr. The result of this meeting was an agreement between our committee, the Advisory Committee on Public Health and the State Department of Health, that we should recommend that a table salt be put on the market at a popular price, containing from .01% to .02% sodium or potassium iodide.

Immediately after this meeting the salt manufacturers were given the following revised certificate: "This salt contains .01% to .02% sodium or potassium iodide, the amount approved by the council and advocated by the Pediatric section of the Michigan State Medical Society as a preventative of goitre, etc."

Since this time some of the salt producers have used sodium iodide and some have used potassium iodide. It appears that potassium iodide costs about one dollar per pound less than sodium iodide and that its iodine content is a trifle lower than that of sodium iodide. Accordingly the salt men preferred to have a certificate read .02% sodium iodide or its equivalent, which in potassium iodide would be about .022%. For the sake of uniformity of iodide dosage, that is as it should be. We are therefore asking you to authorize a certificate to the salt men which calls for a salt containing .02% sodium iodide or its equivalent. The recommendation of the State Department of Health agrees with this statement.

The larger amount of iodide than was contained in our original certificate having been shown to be perfectly safe, and because of the varying views as to the amount of salt consumed per capita per year, and for the sake of uniformity, the committee is desirous of omitting the words "from .01% to .02%" in our last certificate and insert the words ".02% sodium iodide or its equivalent."

Iodized salt with our original certificate was on the general market March 20th, the day preceding our meeting at Lansing.

To sum up the work of the committee the facts in the case are as follows: The advisory committee of the Pediatric Section of this Society succeeded in interesting and getting the co-operation of the salt producers in the goitre prevention propaganda from the standpoint of rendering a public service.

The salt was on the market March 20th, 1924 with the certificate of the State Society printed on the package.

The iodized salt was put on the market at practically the same price as ordinary table salt.

The committee strongly feels that the medical profession as a body express to the public, through a certificate from the State Society, its advocacy of the general adoption of the use of iodine salt in Michigan for the prevention of goitre.

We propose the endorsement of the following paragraph to be used by the salt manufacturers on their labels:

> "This Salt Contains .02% Sodium Iodide or its equivalent. The amount approved and advocated by the Michigan State Medical Society for the prevention of goitre.
>
> "To be effective this salt must be used for cooking as well as for table use.
>
> "Signed—Michigan State Medical Society."

D. W. Cowie, Chairman.

REPORT OF THE COUNCIL

Dr. J. B. Jackson, Kalamazoo, presented the following report of the Council, which was automatically referred to the Business Committee.

The past year has been, on the whole, a successful one for our Michigan State Medical Society. The Grand Rapids meeting was well planned and all arrangements were made for the convenience and pleasure of our members. To the members of the Kent County Society is due great credit for the success of our last annual meeting.

The reports of the Secretary and the Treasurer at the January meeting of your Council were printed in the February number of the Journal. These reports will show that the finances of the society are in good condition. It is also apparent that the amount of $1.00 per member now available from our annual dues for general society expenses is entirely insufficient for the purpose. Profits from the Journal publication are used to make up this deficit. For the year 1923, this deficit was $739.13. Profits from the publication of the Journal were $1,006.96, leaving a net income of $267.83. Our Secretary Editor asks the question—"Is it a sound financial policy and is it fair to limit our Journal by causing it to assume the financial deficit of the Society?"

Our Secretary's annual report further shows that we closed the year 1923 with the largest paid membership in the history of the Society—the total paid membership being 2,900.

In reviewing the activities of our State Society for the past year especial attention should be called to the fact that the special committee of the Periatric Section has succeeded in getting the Michigan Salt manufacturers to place on the market an iodized salt for the prophylaxis of goitre. This has come as the result of a large amount of investigation and work of this committee. At present it appears to be one of the best constructive pieces of work that our society has accomplished in recent years.

The Joint Committee on Public Health Education has held three meetings during the past year. The work of this committee is steadily increasing in its scope. The report of Dr. W. D. Henderson, secretary of this committee, published in the June number of the Journal, shows for this year 160 per cent increase in attendance over last year, at the lectures held, as a result of the committee's activity. The work of this committee deserves the interest and support of every member of our society.

In connection with the work of this committee the Council wishes again to urge upon the society its responsibilities in connection with the publication of Hygeia by the American Medical Association. This monthly magazine represents the greatest single opportunity for educating the public in medical matters. In presenting plainly to the laity the achievements and progress of medical science a sound public opinion regarding medical matters can be developed. This will do more to defeat the passage of pernicious legislation and the promotion of unscientific cults than anything else that we can do. Every member of this society should have a copy of this magazine on his office

table and county societies should see that it is placed in every public library and school in the state.

We wish also to call the attention of the House of Delegates to the very gratifying report of our Medico-Legal Committee submitted to the council at its January session and printed in the February number of the Journal. There can be no doubt that the work of this committee is one of the most important activities of our Society. In the annual report of the committee the suggestion is made that in some counties a program should be devoted to malpractice suits. The chairman states that he would be glad, on invitation, to visit some county societies and devote an evening to the discussion of this very important matter.

The consideration of the new Constitution and By-Laws is the most important work and the House of Delegates has now to consider the draft submitted by this committee. The council as your executive committee wishes to make certain recommendations concerning this matter. At the January meeting the Council went on record as being favorable to an increase in dues. We feel that the scope of our Journal may be enlarged and the Journal made much more valuable to our membership if the earnings from the Journal are not absorbed for general society expense. Attention has already been called in this report to the fact that the one dollar appropriated from our present $5.00 dues for general society expense left a deficit of $739.13 during the year 1923. This amount was taken from the earnings of the Journal thus limiting the work of the Journal.

At the January meeting of the Council the recommendation of our Secretary for the establishing of Educational Medical Clinics for definite districts throughout the State was indorsed. In order to carry out such a plan of district clinics, under the auspices of the State Society, funds must be available for the purpose. In our opinion this plan presents to our society a wonderful opportunity and means for its execution should be provided.

In his annual report to the Council the Secretary Editor made this recommendation—"Create by assessment, contribution and endowment, an Educational Fund so that the earnings of this fund will defray the expenses of the plan of postgraduate education." This recommendation to the Council and this plan of district clinics should receive your careful attention in deciding the amount of our annual dues.

The work of the Joint Committee on Public Health Education is each year widening its scope and for this work more funds will be necessary.

The coming year will again call for renewed activities on the part of our legislative committee. It seems only right that the men who are on this committee should have their expenses paid, for which funds must be provided.

During the past year a County Secretary's Conference was held in Kalamazoo. This conference was well attended and many helpful suggestions were made which should be of benefit to these secretaries in their work. The Council would suggest that such a conference should be made an annual event and that funds should be available for paying the expenses of county secretaries to this conference, when in the judgment of the council the county society is unable to assume this expense. The success of our component societies must depend to a large extent on the work of the secretaries. These men must devote a considerable portion of their time to making the work of their society a success. It seems only fair to make these conferences available to them without expense of money as well as time.

Under section four, article seven of the proposed Constitution is provided that Councilors shall be nominated by the majority vote of the delegates from the respective Councilor districts. This we believe is a much better plan than the present one of leaving the selection of Councilors to a nominating committee. We believe it might be well to make specific provision for the organization of the delegates from each Councilor District and outline rules for the procedure in the nomination of Councilor.

The Council recommends that, in accordance with the recommendation made by Dr. Olin West, secretary of the Journal, the State Society should have some authority in determining who shall become its members. It would seem unwise to delegate this authority entirely to the component county societies. This matter should be cared for in our new Constitution and By-Laws.

The Council would further recommend that a definite course of procedure should be outlined whereby an individual denied membership in his County Society may appeal to the State Society for membership. Under chapters III and VII, of the proposed by-laws, this matter is provided for. We would suggest an additional chapter outlining more specifically the course of procedure by which such appeals may be made to the Council and to the House of Delegates.

The Council would suggest that some provision should be made in the by-laws for the revocation of a charter of the County Societies that exist in name only. County Societies that have only a small percentage of eligible physicians in their membership and that do not hold regular meetings should not be allowed to exist in name only. Affiliation with the State Society should imply a definite responsibility on the part of the component society to engage in active society work.

We would further recommend that the time and place of the annual meeting be determined by the Council.

The Council would recommend that provision be made in the Constitution that the House of Delegates should be the legislative body of our society while the executive function should be retained by the Council.

The council is in favor of the State Society employing a full time executive secretary to promote the work of the society. This would also require more funds to be provided by annual dues.

The report of the Advisory Committee on Public Health, made to the House of Delegates at the Grand Rapids meeting was referred to the Council to be reported on at a later date at the January meeting of the Council. The Council expressed its approval and appreciation of the work of this committee and voted that the committee be directed to continue its activity to bring about a greater degree of co-opeation between the State Society and the State Deparment of Health. The Council further cited that the Advisory Council, as suggested in the report of the Committee to the House of Delegates, be not formulated in view of the fact that such an organization is already in existence as represented by the Joint Committee on Public Health Education.

The Council also authorized the Publication Committee to make available from one to four pages of reading space in each issue of the Journal and that the State Department of Health be requested to utilize this space for the dissemination of information to the profession upon Health

matters, the Publication Committee to exercise its right of censorship of copy submitted.

J. B. JACKSON, Chairman.

COMMITTEE ON TUBERCULOSIS

Dr. W. H. Marshall, Flint, presented the following report, which was automatically referred to the Business Committee.

The House of Delegates, The Michigan State Medical Society:

In considering a survey of the tuberculosis situation in Michigan, your Committee wishes to emphasize the fact that, while all honor for success in combating tuberculosis in our State falls ultimately to medical men, the responsibility for any continued inadequacies in that field also rests with us. We are obligated to advise and guide the public in the means of combating this disease by public measures. It is well for us from time to time to review state laws, and the effectiveness of public institutions for the diagnosis, care and treatment of tuberculosis patients. Your Committee, therefore begs leave to draw your attention to some of these problems.

No physician familiar with tuberculosis any longer believes that it is necessary or even advisable to send tuberculosis patients south or west to get well. When such advice is given to patients who are not moderately wealthy, the physician giving it is doubly wrong; there is no scientific basis for his advice, and further, he is uninformed on conditions of the district to which he sends his patient. Michigan physicians recently were scored by the result of a survey, made by the National Tuberculosis Association, of indigent consumptives who are stranded in some of the more popular resorts. Only five other States were given as "home" by such unfortunates more often than Michigan. The physicians of this State should correct the mistaken notions about the south and west which apparently hold among the laity, for it would seem that the part played by climate in the cure of tuberculosis is greatly over-exaggerated in the public mind.

Your Committee have considered the facilities for treatment which are now available in Michigan, exclusive of private institutions. A recent study of the Michigan tuberculosis sanatoria, by Dr. H. A. Pattison of the National Tuberculosis Association, reveals a decided lack of beds in our State, as well as mediocrity, or even downright inefficiency on the scientific side of some of our institutions. There are exceptions which in contrast stand out brilliantly. The work done at our State Sanatorium is of a high order, but the institution does not meet the requirements of the State, and is in need of funds for improvement and expansion. Of the nine County Sanatoria of the State, only three have full-time medical superintendents. These are in the Upper Peninsula. Without a full-time man no sanatorium can be placed in Class A.

An absurdly low standard for capital investment in County Sanatoria has been adopted by our Legislature. The law provides that a sanatorium, which may receive State aid for maintenance, must have at least $10,000 in buildings and grounds. The latest figures show that but six institutions in Michigan could meet this requirement. Moreover, our State spent but $18,000 during a period, and for a purpose, which drew $225,000 from Wisconsin and $184,000 from Minnesota.

A study of the proper ratio of beds to deaths places them at a number equal to the number of deaths annually. Michigan had 20,400 living cases reported in 1923 and about 2,800 deaths. Therefore we should have about 3,000 beds. We have actually only 2,300, and of that number only a few hundred measure up to Class A standards.

Most of the County Sanatoria have vacant beds for long periods each year. It is not surprising that there should be so little demand for care in these places, in fact, it is surprising that there is any demand. Some County Sanatoria are the last resorts of the consumptive, as places to die in. Moribund cases, usually indigent, are consigned to these places, and as the reputation for many deaths becomes generally known, patients refuse to enter them. Our tuberculosis sanatoria should always be of such high standing that consumptives will make them their first resort rather than their last.

We have made a serious psychological mistake in locating so many of these County Sanatoria on poor farm grounds. While perhaps 90 per cent of sanatorium patients are not pay cases, these people are not paupers in the sense of the poor farm inmate. They have been impoverished by illness and will return to self-sufficiency if they regain their health. Rather than acknowledge publicly that they are paupers, they will refuse treatment in the poor-house type of sanatorium.

Time will not permit to outline the proper location, equipment and management of an ideal sanatorium. But we do believe that even with modern appliances for the diagnosis and care of tuberculosis, an institution is not effective without a full-time medical superintendent, who has made an exhaustive specialized study of the disease with which he deals. We are deluding ourselves and the public if we believe that a physician in private practice can effectively manage a sanatorium by running out occasionally to look over the cases. Specially skilled men in sanatoria are a distinct asset to the profession of their district, for they can stimulate medical activity among the local men as consultants, and as teachers of chest diagnosis, especially in connection with a local diagnostic clinic.

Your Committee believes that certain Michigan laws relating to the care of the tuberculous should be revised. The present minimum capital investment required for State aid, namely $10,000, should be wiped out and State aid allowed on a basis of efficiency. The clause limiting State aid for the operation of institutions which now makes $3,000 the maximum amount to be received by any one county, should be wiped out. We believe that not only should the State pay half the actual cost of caring for tuberculous indigents, but it should also offer State aid toward the building of a limited number of additional institutions. This would promote the building of a number of good sanatoria of sufficient capacity and serving enough territory to make possible the best kind of medical and social service work.

In promoting the earlier diagnosis of tuberculosis, this body alone must struggle with the short-comings of its members. The Michigan State Tuberculosis Association, in the attempt to organize local permanent diagnostic clinics, has had difficulty in procuring local examiners who are qualified to do good chest work. As the success of the tuberculosis campaign rests with the general practitioner, we must help him in his diagnostic problems. In discussing the problem with Professor Warfield, he suggested the establishment of an annual summer course on diseases of the chest. Two weeks could profitably be spent at Ann Arbor in the study of physical diagnosis, in a review of the pathology of tuberculosis and in the consideration of immunity problems. The last two weeks could well be given in the wards at Howell or at Northville, devoting the entire time to the diagnosis and treatment of tuberculous cases. Such a course would easily rival those given at Saranac Lake

or Colorado Springs, and would not be as expensive to the practitioner.

The Michigan Tuberculosis Association, now doing such splendid work under the able supervision of T. J. Werle, is ready to establish diagnostic clinics in many communities of the State where there is now no such service. This is very important work as 75 per cent of our counties have no permanent clinics. These travelling clinics might well be changed and their scope enlarged. We would suggest that the University Extension Division provide good teachers of chest diagnosis to conduct these clinics for two or three days at a time. The local doctors might pay a small fee, bring in cases with various chest conditions, and receive in return training in the proper methods of eliciting physical signs and in the accurate interpretation of the same. This kind of work is being successfully done by the Extension Division of the University of Wisconsin.

Clinics are essential for the follow-up care and supervision of ex-sanatorium patients. At present, in many instances, these people are dumped back in their old surroundings, poorly fitted for the struggle for existence. Moreover, the nursing personnel of the clinic can do most efficient work in the rounding up of contacts. Sir James Fowler pertinently remarks that "if we had been more concerned with contacts and less with tuberculin, things would have been better." And in this connection, we believe that local Tuberculosis Societies would be more effective if they confined their attention to known cases and to contacts rather than spreading out their efforts over the whole field of public health.

W. H. Marshall, Chairman.
Frank J. Sladen.
B. A. Shepard.
A. Nyland.
H. Rich.
I. L. Spalding.

REPORT OF COMMITTEE APPOINTED TO CONSIDER PLANS FOR PROMOTING PERIODIC HEALTH EXAMINATIONS

The House of Delegates, The Michigan State Medical Society:

The origin of your Committee is indicated in the attached correspondence. Your Committee is pleased to report that it met at Lansing, Michigan, on Thursday, June 19, 1924, with Mr. Theodore J. Werle, representing the Michigan Tuberculosis Association. The proposal to undertake a campaign to promote periodic health outform the basis of this preliminary report.

The profession of this State must be cognizant of the fact that there has recently been a wide-spread propaganda for periodic examinations with the hope of adding to the span of human life. The American Medical Association has endorsed the movement and has prepared a circular dealing with the scope of the examination, as well as history sheets for the physician's use. The medical editors of newspapers have kept the subject before the public, and as a result the laity has been manifesting an increasing interest in the idea, which is analogous to the period stock-taking of the merchant, or the regular overhauling of an automobile. A few medical societies have given it serious attention, especially the Medical Society of King's County, Brooklyn, New York, whose methods should be studied by every one really interested in the subject. Your Committee therefore feels that there is a growing public demand for such service.

Already the field has been invaded by commercial organizations, who agree this service for a stated sum per annum, only part of this fee going to the physician who makes the examination. The effect of this on the independence of the physician is obvious, and the expense to the public is much greater than is necessary, for these organizations are prospering and are paying good dividends. Clinical groups are undertaking this work and often render good service, although their findings are not always correlated satisfactorily.

We may properly ask, why has all this come about? We feel that the private physician, with his multitude of cares, has again neglected an opportunity. The layman is too apt to look upon his family physician as only needed and fitted to meet emergencies. He does not seem to realize that many doctors have much broader outlook. We feel that nothing should be endorsed by our Society in this matter which would in any way undermine the patient's confidence in his family physician. His acquaintance with his patient's constitution, with his environment, and with his problems, is a valuable background for any clinical picture. We therefore believe that the proper person to make these examinations is the family physician, who, if he finds, after a careful examination, that he needs more help, will supplement his findings with those of local specialists, such as laboratory men, roentgenologists, etc. It does not appear that the technique of health examinations is materially different from that of ordinary history taking and physical examination.

However, your Committee begs leave to dwell for a moment on the obligations such a campaign will impose upon the physician. It is a well known axiom among advertisers that a poor product will eventually be eliminated from the markets by the advertising which will make the sale of a good product successful. The principle is simple enough—advertising influences people to buy. If many people are influenced to buy the poor product, there will be many people to testify later how poor it is. The advertising is said to "boomerang." The analogy here is plain. A campaign urging people to seek out their physician and, though apparently in good health, have him carefully examine them in order that the earliest symptoms of disease might be detected, presumes that all physicians are capable of giving such an examination. Discussing this subject with an intelligent layman who patronizes a medical group for such examinations, we elicited the reply that he found the average doctor too slip-shod in his methods. Your Committee feels that the physicians of our State, as individuals, as County Societies, and as members of a great State Society, should concentrate much attention and effort, to stimulate each doctor to acquire that high degree of skill which examinations of the apparently well, without marked pathological changes, would seem to require. If the medical men of the State do not, as a body, endeavor to improve their service wherever possible, if they do not readily and universally observe the comparatively high standards for this work which the public is learning to expect, it is not unlikely that this campaign will in the end "boomerang" also. Your Committee begs leave to point out, therefore, that such a campaign offers an excellent stimulus to the men of our profession for perfecting themselves in physical diagnosis. We respectfully urge that the Michigan State Medical Society unhesitatingly grasp this opportunity to co-operate with the Michigan Tuberculosis Association somewhat in the manner respectfully submitted herewith.

With the physicians:

1. To improve the history taking and diagnostic methods of the physician, we suggest that each County Society devote an entire program to this topic.

2. Further, a master clinician might be selected to give a demonstration of such work at the meeting of the State Medical Society much after the plan in which diagnostic clinics are conducted at the meet-

ings of the American Medical Association. In such ways our members would be prepared to do these examinations in a satisfactory manner. May we not hope to inspire in each of our members the feeling of obligation to give just as good an examination as the next man?

3. We believe that we should agree upon a standard examination blank. The form published by the A. M. A. is cheap and handy. However, many of the questions on the first page of this form are rather indefinite and their purpose seems rather vague to one who has read them as filled out by the average layman. The form used by the Brooklyn Society is admirable.

4. Leaflets explaining the subject in an attractive manner should be prepared and furnished at cost by the State Society. These could be kept on the doctor's table for distribution to his patients, and they could also be distributed by various agencies. The Michigan Tuberculosis Association has offered financial and other assistance in the preparation and distribution of circular matter.

With the public:

The question of how the public may best be reached, demands much thought. The average County Medical Society is too small a unit to finance an expensive local advertising campaign. The State Society might well appoint a committee, preferably of experienced health officials, to prepare propaganda. They might give to the press, brief attractive editorials on this topic, and supply material to various newspaper syndicates. The Michigan Tuberculosis Association, with its many field workers, are willing to help. Other public health agencies, the University Extension Bureau, dinner clubs, etc., might easily be interested. At certain public lectures, such as those given under the auspices of the T. B. Association, men and women might be prevailed upon to indicate, by signing their name to cards provided for the purpose, that they are convinced of the value of regular physical examinations. We must not forget the pediatric aspect of this program and we believe that intelligent parents will in the future be educated to have periodical physical examinations of their growing children. On such cards, the layman would be expected to give the name and address of the physician he wishes to do the examining and the month of his birthday. These cards would be returned to a central clearing station and filed by months of birthdays indicated. For numerous practical reasons the slogan, "Have a health examination on your birthday" is a good one to adopt. From this central agency, postcard birthday reminders are mailed out each month to the signators of cards falling due on that month, recalling their promise to be examined.

Your Committee hesitates to give here, lengthy details of the plan of work as it was discussed and tentatively approved. However, your Committee is convinced of the feasibility of the suggestions which were considered, and of the plan for co-operation with the Michigan Tuberculosis Association as offered by Mr. Werle.

Your Committee further recommends that a Committee be appointed to put this work under way, and we would respectfully suggest that it be composed largely of men who are actively interested in public health problems.

Respectfully submitted,

W. H. Marshall, Chairman.
H. M. Rich.
B. A. Shepard.
B. R. Corbus.
A. Harvey Miller.

April 30, 1924.

Dr. W. H. Marshall,
Flint, Michigan.

Dear Dr. Marshall:

I am enclosing herewith copy of a letter from the Secretary of the Michigan Tuberculosis Association. Upon the receipt of this letter, I referred it to President Connor with the recommendation that I believed that our State Medical Society should undertake this campaign. That there should be no delay and that he should appoint a committee that should represent our Society and that this committee should develop these plans in this campaign.

I am happy to state that Dr. Connor has co-incided with this recommendation and he has appointed the following committee to represent the State Medical Society:

Dr. W. H. Marshall, Flint, Chairman.
Dr. H. M. Rich, Detroit.
Dr. B. A. Shepard, Kalamazoo.
Dr. B. R. Corbus, Grand Rapids.
Dr. A. Harvey Miller, Gladstone.

It is therefore President Connor's desire that you get in touch with the Secretary of the Michigan Tuberculosis Association and promptly institute this plan.

I have not written to any of the members of your Committee, but am leaving that for you, and feel that at the same time you inform them, that you will also be able to outline your general ideas and secure an early meeting of the Committee and push this work forward.

Please be assured that any assistance that I can give you and any publicity that you may desire in the Journal will be available at any time that you give expression to such a request.

With personal good wishes, I am

Yours very truly,

F. C. Warnshuis,
Secretary-Editor.

April 26, 1924.

Dr. F. C. Warnshuis,
Powers Bldg.,
Grand Rapids, Michigan.

Dear Dr. Warnshuis:

As you perhaps know, there is a nation-wide movement on foot to promote annual physical examinations. The State Commissioner of Health as a rule has been placed in charge of that campaign for each State. Some time ago I was told that our State Commissioner does not at present anticipate putting on an active campaign and it was the sense of the conference that anything this Association might do in that direction would not be objected to by him.

One of the most important things that we can do to bring about the earlier discovery of tuberculosis is to increase the demand among the lay people for chest examinations. Our Association would be very glad to undertake some plan for promoting this idea which might meet with the full approval of the medical men of the State. I am writing you, therefore, to ask whether you would care to suggest how we might best serve the interest of the medical men and the public in bringing about this desirable end.

It occurred to me that we might perhaps have printed for distribution to the physicians of the state, on demand, index cards and an inexpensive circular, explaining the thing, which might be given to patients; and people generally by our field workers. The card might be signed by the individual, indicating the name of the physician whom he would like to have examine him at regular, stated intervals. These cards would then be returned to the physician and filed in his office to be gone over once a month so that notices

might be sent to the names and addresses given, for examination that month. The month indicated by the signator to the card might be his birthday month.

Some such plan as that might be worked out, I presume, in greater detail, is comparatively inexpensive, and conceivably might increase the interest in general physical examinations as well as serve the purpose of this Association.

I shall be much pleased to work out something with you if you consider it wise to do so.

Very sincerely,

Theo. J. Werle,
Executive Secretary.

PERIODIC HEALTH EXAMINATIONS

—Supplementary Report

Since submitting our preliminatry report on periodic health examinations, we have been working on the problem and have accumulated some information that may be of value to the society. It appears that the subject is receiving much attention in many states and just now seems to be one of the greatest objectives of public health endeavor. It appears that a great deal of educational effort must be made to convince the public of the necessity for such examinations. In order to facilitate this educational campaign which should be carried on by County Society officials, we submit the sources of assistance that may be obtained from several organizations now in this field.

The Metropolitan Life Insurance Company, in supporting a national campaign to persuade our people to have birthday health examinations, has prepared a moving picture film entitled "Working for Dear Life." This film is interesting, artistic, and professional in its viewpoint. It provides about fifteen minutes of entertainment. It can be secured by addressing the Welfare Division, Metropolitan Life Insurance Company, 1 Madison Avenue, New York City. The only expenses to the exhibitor, are the transportation charges both ways.

The National Health Council, James A. Tobey, Administrative Secretary, 370 Seventh Avenue, New York City, has been active in the past year in the promotion of health examinations. This council has some useful material for sale at cost price. An eight page pamphlet, "Be Sure of Your Health —Have a Health Examination on Your Birthday" is designed for popular distribution. The cost is three cents apiece. They also provide attractive posters 15"x19" at 10 cents apiece. Three papers by Mr. Tobey cover the subject very well. They are: "Health Examinations and Social Service," "In Hospital Social Service 1924, p 347; Health Examinations and Life Prolongation" in Journal of Outdoor Life, April, 1924; "The Health Examination Movement" in "The Nation's Health," September, 1923.

The American Medical Association has a useful reprint by Dr. Haven Emerson on "Periodic Health Examinations of Apparently Healthy Persons." Every physician in the state should have one of these. As already stated, the Association can also furnish examination blanks.

The Illinois State Medical Society has a Bureau of Publicity that has been doing some excellent work in promoting lay education on medical matters. B. C. Keller is Director of Lay Education and may be addressed at Room 1522, 25 E. Washington St., Chicago. In a recent letter Mr. Keller says: "We have rather gotten away from "blanket" publicity in our Illinois Lay Education Campaign. We make every effort to build our news publicity around the situation as shown in the communities where these drives are being put on. We have a few things in semi-educational style which have been rather popular both among doctors and laymen." I am submitting a few of these stories with this report.

Sets of lantern slides, to illustrate lectures on the subject may be obtained from Johnathan A. Rawson, Jr., 18 East 37th St., New York City. A set entitled "Have a Health Examination on Your Birthday" is very suitable for medical society purposes. It consists of 30 slides, 20 colors and 10 plain. Each set is accompanied by a lecture manuscript outlining a consecutive and easily grasped story which any lecturer can master in a few minutes' study. Newspaper publicity material is also sent with the slides. The cost of the set is $15 or it may be rented for $3 per showing.

The Attractoscope Corporation of New York City have for sale a Public Health Service Attractoscope. This is an automatic stereopticon for display in windows, day or night. The picture shown is 15x16 inches. The outfit is connected with a lighting circuit and operates continuously without any personal attention for any period desired. It has a capacity for 25 slides and when placed in an appropriate public window, gives a "silent talk" that always attracts a crowd. It can be secured from Johnathan A. Rawson, Jr., 18 E. 37th Street, New York City, for $200 F. O. B.

These suggestions submitted by your committee should be sufficient, at least, to initiate the campaign of publicity that will be necessary before these examinations can become popular.

Respectfully submitted,
W. H. Marshall.

September 9, 1924.

COMMITTEE ON PUBLIC HEALTH

The House of Delegates, The Michigan State Medical Society:

Your Committee on Public Health beg leave to report as follows:

The outstanding activities of your Committee during the past year have been, stimulating interest in the prevention and cure of simple and adolescent goitre, the use of toxin anti-toxin for the prevention of diphtheria, and periodic physical examinations. Our work has been to educate the public to the necessity of these preventive measures and to arouse an interest in the profession to the necessity of carrying out these preventive measures among those who look to them for things medical and surgical.

We would recommend that the profession get thoroughly acquainted with the great public health movements of today and to take an active part in the shaping of the policies that are to be adopted to accomplish the results sought.

That each County Society take up specifically the subject of periodic medical examinations of apparently healthy persons, perhaps following the plan of Kings County, N. Y. Medical Society, which has been the outstanding accomplishment along this line in the United States.

That the profession assume the responsibility that should be theirs in the education of their clientele to the necessity of taking advantage of the various proven immunizing agents, namely,

Vaccination against smallpox.

Toxin anti-toxin for the prevention of diphtheria.

The use of iodine in some form for the prevention and cure of simple or adolescent goitre.

We would especially call your attention to the lectures given to lay audiences by the members of this Society under the auspices of the joint committee of the University, or the State Medical Society at a

considerable personal sacrifice of time and expense. If these lectures are worth while and are to be continued in the future, it would be wise that some definite arrangement be made with the speakers whereby at least their expenses would be met.

C. C. Slemons, Chairman.
John Sundwall, M. D.
A. J. MacKenzie, M. D.

In the absence of the Chairman, Dr. C. C. Slemons, the Speaker, ruled that this report should be referred to the Business Committee, as printed in the program.

COMMITTEE ON LEGISLATION

Dr. Hugh Stewart, Flint.

Dr. Stewart: I have no special report, inasmuch as there has been no meeting of the Legislature during the year, but there are a lot of things that the medical men in the State of Michigan should take into consideration.

During the past session of the Legislature, in 1923, Dr. Hume was Chairman and I was a member of the Committee. A lot of measures were up before the Legislature that the Legislative Committee had to deal with and as I was a member of the Senate a few years ago I took it upon myself to go before the Legislature to deal with these things in which the medical profession is interested. The only recommendation I would make to this House of Delegates is that they make some provision in their budget to take care of the Legislative Committee. I am all through with the Legislative Committee in the next Legislature, but I will say that the next Legislative Committee which is appointed should be allowed some money to take care of the expenses, so far as the medical profession of the State of Michigan is concerned, to protect the doctors.

Dr. Brook: Inasmuch as we are working under the new Constitution, and as all expenditures shall be made by the Council, I move that the remarks of Dr. Stewart be referred to the Council.

Motion seconded and carried.

COMMITTEE ON VENEREAL PROPHYLAXIS

The House of Delegates, The Michigan State Medical Society:

Your Committee on Venereal Prophylaxis respectfully reports that during the past year no innovation in the constant endeavor to reduce the number of cases of venereal diseases has been inaugurated, but that lines to prevent their spread by more energetic measures of treatment, especially by Boards of Health, have been more tightly assumed.

The Michigan Department of Health bases its belief of improved conditions on the larger number of cases reported. Whether this belief justifies a more optimistic view as to the efficiency of prophylactic measures, and whether this reporting and the educational means which have been adopted have in any measurable degree reduced their prevalence is still a debatable question. But certain it is that in the larger cities at least the Boards of Health have as a prophylactic measure accepted the responsibility of treatment. Perhaps the ratio is not so great as the following items, kindly furnished to the Committee by the Michigan Department of Health of the work of the Venereal Disease Division for the year 1923, show, for many physicians do not report their cases:

"The total number of venereal diseases reported was 20,312, as compared with 17,707 in 1922, an increase of 2,605. Of these, 10,408 were syphilis, 9,597 gonorrhoea, and 235 chancroid.

"The number of physicians reporting, 1,684. The number of clinics reporting, 19. The total visits to clinics, 167,629. Patients treated in clinics, 45,621.

"Doses of Salvarsan administered in clinics, 23,908, and mercury, 49,617. Number of druggists reporting, 1,500. Number of prescriptions reported, 21,891. Number of cities visited, 658. Number of cases investigated, 783. Number of reported sources of infection investigated, 372. Other visits in connection with venereal disease cases, 1,990. Number of tubes of New-arsphenomine distributed, 10,130, of which 2,725 were distributed gratis for the treatment of indigent patients and 7,405 were supplied at cost."

This is probably not the place nor the time to enter into a renewed discussion of the influence in the future upon the medical profession of the assumption under the guise of Preventive Medicine of this enormous amount of "clinic work" by Boards of Health; but it seems to the Committee that, meagre as the progress has been, the only hope of a solution lies in this continued education of the public and the careful keeping of records and statistics, together with more specificity and more thoroughness in our efforts to eliminate the sources of infection. The great difficulty in doing the latter is realized, but still it is the main endeavor which gives promise of ever decreasing the incident of venereal disease. The infected cases must be more sufficiently shown up to make sure that they are not spreading the disease. Reliable records can be accumulated and proper medicinal aid distributed only by Boards of Health, Municipal and State, and to this extent their work should be heartily endorsed.

Andrew P. Biddle, Chairman.
W. F. Martin.
George Sewell.

Dr. A. P. Biddle, Detroit, Chairman, moved that the report be accepted as printed and referred to the Business Committee.

Motion seconded and carried.

COMMITTEE ON MEDICAL EDUCATION

The Committee on Education, having the information that the Presidential Address this year will involve the subject of medical education in Michigan, it therefore, in order to avoid possible duplication of subject and time, believes that the usual Annual Report on Education should be omitted.

Yours very truly,

B. D. Harison, Chairman.
W. H. McCracken.
Louis Warfield.

Dr. B. D. Harrison, Detroit, Chairman, moved that the report be accepted as printed and referred to the Business Committee.

Motion seconded and carried.

COMMITTEE ON PUBLIC HEALTH EDUCATION

The House of Delegates, The Michigan State Medical Society:

This Committee was organized December 13, 1921, on the initiative of this Society and in 1923 the House of Delegates provided that it should be represented by five members on the Joint Committee. Originally it consisted of representatives of this Society and the

University, but the Committee itself soon admitted to its councils a representative from the State Department of Health, the State Dental Society and the Detroit College of Medicine and Surgery. At the January meeting this year it was provided that the Michigan Tuberculosis Society, the State Nurses' Association and the Michigan State Conference of Social Work should each have a representative upon this committee. The Joint Committee is presided over by the President of the University and the Director of the University Extension Division is Secretary and has charge of the activities of the Committee. The Committee holds its meetings during the year in January, April and October and these meetings have been generally fully attended.

The Secretary has charge of assigning lectures when he receives applications for them and the demand for these health lectures has been increasing progressively. In Detroit the assignments have been made under the joint auspices of the Joint Committee and the Wayne County Medical Society Committee on Public Education.

During the year the following number of lectures have been given:

Outside of Detroit	189
In Detroit	76
Average attendance at lectures outside Detroit	170
In Detroit	620
Total attendance outside Detroit	32,000
In Detroit	47,000

These figures disclose that the popular interest in these lectures is rapidly increasing, and if the County Medical Societies throughout the State would evince the active interest in the proposition that has been shown in Wayne, this movement would become of State-wide importance. The Societies represented on this Committee provide the expenses for their members going out on assignments to lecture, except this Society, which pays one-half, it being held that each lecturer representing the State Medical Society should himself bear one-half of the expense. Many of our members, in fact, have not sent in bills for the half. If the proposed addition to our dues is adopted, it is suggested that this Society should provide for paying all the expenses of its members participating in this work.

Respectfully submitted,
W. T. Dodge, Chairman.

Dr. W. T. Dodge, Big Rapids, Chairman, moved that the report be accepted as printed and referred to the Business Committee.

Motion seconded and carried.

COMMITTEE ON CIVIC AND INDUSTRIAL RELATIONS

The House of Delegates, The Michigan State Medical Society:

Your Committee on Civic and Industrial Relations respectfully submits the following report:

There has been during the past decade much discussion about the change in relationship between the physician and the public. Indeed, it has been asserted that the old family physician was disappearing and that it has become increasingly difficult to obtain the services of a general practitioner in the smaller cities and the rural communities. The practice of medicine and surgery in such localities would be equally attractive to the practice in the larger cities, provided that the physician were given facilities equal to those found in our larger hospitals.

While it is true that many small and excellent hospitals have been manned in such localities, yet they are not available to every physician in good standing in that locality, and it is only when such a condition has been achieved that the laity will receive better service from the profession in general.

It would be impossible for the members of the medical profession to build and maintain such hospitals themselves, but it would be perfectly proper for each County Society to urge the erection of such hospitals in their own communities.

Probably the greatest difficulty that the practitioner in the small town has to contend with is the competition furnished by the State University. With their present system of taking pay patients as well as charity patients in force, it will only be a short time before patients with chronic conditions and those needing operations of choice will seek the services of the University in ever increasing numbers. The chief reason for this is that the small hospital cannot compete with an institution, a portion of the expense of which is maintained by State taxes—nor can the physician in private practice, with the heavy overhead expenses that he must bear in order to be properly equipped for present day medical practice, compete with a physician connected with the University whose entire service is maintained at State expense.

The result will be that accidents and the acute infectious diseases will be all that is left for the physician in the rural community to care for and thus, at least, 40 per cent of his practice will be taken away from him and that, the most remunerative part. Thus, if this condition is allowed to go on, it will be increasingly difficult to obtain physicians who will find it possible to exist in such communities, and the quality of the service rendered will decrease accordingly.

We recommend that the seriousness of this situation be brought to the attention of the University authorities, and that they be urged to adopt such means as appear feasible to correct the conditions.

Again referring to the changed relation between physicians and laity, if such exists, what are the causes and the remedies? There are undoubtedly many causes for such a change over which we may have little or no control, but is it not possible that we may ourselves be responsible for this "unrest" to some extent, at least? Personally we believe one of the prime causes for dissatisfaction on the part of the public is the fact that some physicians have been and are charging exorbitant fees for insufficient and inadequate service. We will not discuss the very large fees charged by some surgeons for major operations. That has been going on for some time and may or may not be justifiable in some cases; it certainly is not in all cases. But let us take an insight into what else is happening and we must admit, if we are fair, that the prices sometimes charged for obstetrical cases, for minor operations like tonsillectomies, for injections of salvarsan, for complete physical examinations and even in our newest specialty (preventive medicine) the fees that are charged at times for preventive inoculations, are not only excessive, but outrageous. It seems to this Committee, therefore, that if we desire to establish the old-time respect and regard for the doctor on the part of the laity, we begin at once to remedy some of these faults. We recommend that our young men be taught that their first duty as physicians is a service to mankind and that remuneration is secondary. We, as an organized Society, should take the position that physicians who are practicing for "revenue only" fall into the same class as the various cults whether they advertise or not. We recommend that the Society adopt ways and means to correct this evil wherever and whenever it is found to exist.

Another civic relation which calls for our consideration is the relation between the practicing physician and the privately endowed hospital. We will not discuss the question as to whether a hospital should be "open" or "closed" as far as its staff is concerned, but limit our discussion to the relation between the hospital and members of its own staff. Members of

a hospital staff are an asset to that institution, they furnish the cases that pay the overhead. Even the younger men do this to some extent and both the older and younger physicians do much work for nothing for the hospital. The point that we wish to bring up is that in return for this service, when a member of the staff has a case for which the hospital bill is a burden, then the hospital should reduce its charge and give the doctor a chance for some remuneration. As it is now the hospital always gets its full charge and the doctor often must give his service entirely gratis. This is not a fair relation and should be remedied.

Now we come to consider the much discussed relation of the Public Health Departments to the practicing physicians. The principal work of a Department of Health at present is educational. The Health Commissioner and his staff should teach the public the need of looking after their health. This instruction is furnished by means of public health pamphlets, by clinics, by visiting nurses, and in other ways. As an organized Medical Society we should support Public Health Activities, but we should in return expect the Departments of Health to adhere as closely as possible to the educational and preventive side of medicine and not encroach upon the field of the practicing physician. There will necessarily be some overlapping, but it must be watched or the medical profession will not cordially support Public Health work. We recommend that a resolution conveying this idea be passed and copies sent to the State Department of Health and to all organized City Departments of Health in the State.

Guy L. Kiefer, Chairman.
J. Walter Vaughan.
Harry M. Malejan.
A. V. Wenger.
C. D. Aaron.
W. K. West.
A. H. Miller.

Dr. Guy L. Kiefer, Detroit, Chairman, moved that the report be accepted as printed and referred to the Business Committee, and urged that this Committee bring in definite resolutions that might be acted upon.

Motion seconded and carried.

DELEGATES TO AMERICAN MEDICAL ASSOCIATION

Dr. J. D. Brook, Grandville, presented the following report:

At the seventy-fifth annual session of the American Medical Association, held at Chicago, June 9-13, 1924, your Society was represented by the regular delegates, A. W. Hornbogen, G. E. Frothingham, H. A. Luce, and J. D. Brook. These were augmented by Dr. B. R. Shurly of the Otolaryngological Section, and Dr. L. J. Hirschman of the Section on Gastro Euterology, giving Michigan six delegates, besides the Speaker.

It would be impossible to completely cover in this report the entire transactions of the House of Delegates, since they contain fifty-two closely printed pages the size of the A. M. A. Journal, but we desire, nevertheless, to call your attention to some of the more outstanding points of its deliberations.

1st. The Speaker's address dealt necessarily with problems of policy and legislation, embracing suggestions and recommendations for possible betterment of the functioning of its constituent associations, and the welfare of its individual members.

We commend to your careful perusal and study, the address of the Speaker, couched in rhethorical gems the product of an artistic literary mentality, disclosing and yet covering with the even touch of delicacy, the artistic hand of the astute political diplomat.

2nd. We suggest that you all read carefully the address of President-Elect, Dr. Wm. Allen Pusey. It deals almost entirely with the high cost of nursing and medical training, with remedies suggested. This is a matter which now confronts us, and the members of the House of Delegates from each state should express themselves through their delegates to the A. M. A. as regards these vital problems.

3rd. In a supplementary report of the Judicial Council, Dr. M. L. Harris, Chicago Chairman, presented a subject of interest to all physicians. It can best be given you by quoting briefly from his report as follows:

"The medical profession is confronted today with one of the most important and serious problems that it has been called on to meet. Briefly, and in business parlance, the question is: 'Shall the medical profession vend its products directly to the consumer, or shall it sell them to a middleman or third party?' This question comes to the attention of the Judicial Council by reason of the extensive propaganda that is being waged at the present time in regard to periodic health examinations. The American Medical Association has gone on record through this House of Delegates favoring periodic examinations, and this Council concurs in the desirability of such examinations being made. At the last meeting of the House of Delegates, however, the question now raised was not considered. Since then a number of commercial organizations have entered the field and, as middlemen, or jobbers, are offering to furnish periodic medical examinations to the public generally for a stated sum, per annum and to send reports of the findings at the examinations to the examined; and some of these organizations are giving advice to the examined as to what they should do for the conditions found. These examinations, of course, can be made only by physicians; hence these companies are signing up contracts with physicians throughout the country to make examinations of all persons sent to them by the particular company holding the contract, and to forward the reports directly to the company.

"For these examinations, the company pays the physician a definite price and then sells the results of the examination to the individual examined at a much higher price. In other words, these companies acting as jobbers buy the physician's services at one price and sell them to the public at another. The questions that should receive the most serious and earnest consideration of this House of Delegates are: 'Should the physician deal with the jobber, or should he sell his services directly to the consumer? and, What is going to be the ultimate effect on the independence and the welfare of the physician as a result of thus dealing through a jobber, or middleman?'

"When a physician signs a contract with a commercial organization to make physical examinations of all persons sent to him by the organization for a price set by the organization and allows that organization to make its own charge to the individuals examined for the services rendered by the physician, the physician is selling his independence to the jobber. One of the largest jobbers in this line buys the services of the physician for $5 and sells it to the individual for $20 or $25. It is the knowledge of the physician that gives value to the

services, and this value is not enhanced or increased any by passing through the jobber's hands."

Dr. Harris further goes on at some length, giving figures and facts, and closes his report by moving that the subject be made a special order of business for Tuesday, June 10, at 2:15 p. m. At the appointed time Dr. Harris moved that the House of Delegates go in Committee of the Whole. Dr. G. E. Follansbee, as Chairman of Ohio, made the following report of the Committee of the Whole, which was unanimously adopted by the House:

Resolved, That the Committee of the Whole recommends to the House of Delegates that the practice outlined in the supplementary report of the Judicial Council be condemned as against the best interests of the public; and be it further

Resolved, That the Judicial Council be instructed to carry on an educational campaign in conjunction with the state associations and to cooperate with other Councils and Bureaus of the American Medical Association in the promotion of periodic health examinations by family physicians.

4th. Dr. Wendell C. Phillips, Chairman of the Board of the Trustees, stated in his report that the total circulation of Hygeia December 31, 1923 was 23,687; Of these subscribers 14,175 were physicians, and 9,512 were laymen. As was anticipated, the publication of Hygeia is an expensive venture, its publication entailing a net loss of $38,990 during 1923. Dr. Phillips urges support of the publication from a greater number of Fellows and Members of the Association. Your delegates recommend that the physicians of the various communities of the State make an effort to place Hygeia in their local school libraries.

The Board of Trustees also makes the following statement regarding Federal Income Tax:

"The Bureau of Legal Medicine and Legislation filed a brief with the committee appointed by the Secretary of the Treasury to draft a revision of federal tax laws, urging the claims of the medical profession to the right to deduct traveling expenses incident to attendance at meetings of medical societies and to deduct the expenses of postgraduate study, in the computation of federal income taxes. The committee having failed to recommend the relief sought, a similar brief was filed with the Committee on Ways and Means, of the House of Representatives. At the close of the year, the matter was pending in that committee."

5th. Dr. Olin West in his Secretary's report, makes some very pointed statements in regard to "Constitution and By-Laws of State Associations and County Societies." Inasmuch as we have before us for consideration a committee report presenting a revised constitution for possible adoption, it seems that Dr. West's remarks are most timely and we therefore quote him as follows:

"The Constitution and By-Laws for constituent state associations, and the Constitution and By-Laws for component county societies, prepared by a special committee more than twenty years ago, were very generally adopted. Since their adoption, many changes have been made by some societies, while none of any moment have been made by others. In some instances very material changes have been made, and there seems to be a tendency toward further and somewhat radical amendment. It may be wise to seek the adoption of a reconstructed Constitution and By-Laws for state associations, and for county societies as well, to be uniform as far as the peculiar conditions in the various states will permit of uniformity. There are certain ambiguities in the present instruments which need correction or clarification. This may be especially true of sections in which certain authority is delegated by the state association to the county society, and it may also be true that there should be more specific definition of the authority of the state association over members as members of the state organization.

It is highly important that there shall be no provisions in the Constitution and By-Laws of the County Society that conflict with those of the Constitution and By-Laws of the State Association or of the American Medical Association. It is entirely possible that, in some instances at least, there has been too little examination by the State Associations into the condition and the amendment of County Society Constitutions and By-Laws, especially the By-Laws. Each County Society is supposed to hold a charter from its own State Association, under which it receives certain authority and under which it also subscribes to the government of the State Association in certain essential matters. The State Association, in turn, is a member of the "Federacy of Constituent Associations," which is the American Medical Association, though no charter is issued to a Constituent Association by the national body.

The same thread of organizational principle should run through the whole fabric of organization. The rights and privileges of every member should be equal in every unit of organization, except as the need for the present classifications of members is intended to be, and is, thoroughly democratic, and must be so maintained. This can be done only as the governing principles are set out in the Constitution and By-Laws of the Association, of the State Association and the County Society, so that they shall be applied with all possible uniformity in every organizational unit. An occasional revision of all of them, with due regard to the relation of each to the other, and with a view of removing all conflicts, ambiguities and redundencies, would seem to be wise procedure. At any rate, the matter is submitted for consideration by this House as being important enough to deserve special study."

The Reference Committee, to whom the Secretary's report was referred, Dr. E. Elliot Harris, New York, chairman, makes the following recommendation in regard to the above portion of the Secretary's report, also unanimously adopted by the House:

"Your Committee recommends that a special committee of three be appointed, of which the Secretary should be chairman, for the purpose of investigating and submitting recommendations to the House of Delegates at its next annual session, regarding the revised Constitutions and By-Laws for constituent State Association and component Societies."

6th. Dr. T. C. Chalmers, New York, introduced the following resolution which was unanimously adopted by the House of Delegates:

"Whereas, Alcohol is a drug necessary in the treatment of certain diseases in the opinion of a majority of practicing physicians, as heretofore determined by the poll of the American Medical Association, and

Whereas, The use of alcohol in medicine by physicians is limited, regardless of the condition of the patient, by the National Prohibition Acts, and

Whereas, The confidential relations maintained between the physician and his patient are violated by the said National Prohibition Acts, and

Whereas, The interests of the patient and the success of the physician require that such medicinal alcoholic liquor as is prescribed in the treatment of disease be of known purity and alcoholic content, and

Whereas, This can be accomplished only by the marketing of bottled in bond alcohol for medicinal purposes in containers suitable for dispensing, unopened, by pharmacists in such sizes as will meet the patient's needs; be it

Resolved, That the House of Delegates of the American Medical Association expresses its disapproval of those portions of the National Prohibition Acts which interfere with the proper relation between the physician and his patient in prescribing alcohol medicinally.

Resolved, That the House of Delegates of the American Medical Association instruct the Board of Trustees to use its best endeavor to have repealed such sections of the National Prohibition Acts as are in conflict with the above resolution and also use their best endeavor to have the Commissioner of Internal Revenue and the Prohibition Commissioner issue revised instruction on the use and the prescribing of alcoholic liquors for medicinal purposes by physicians.

Thursday, the last day of the session, was largely given over to the election of officers which resulted as follows:

President—Dr. Wm. D. Haggard, Nashville, Tenn.
Vice President—Dr. E. B. McDaniel, Portland, Ore.
Secretary—Dr. Olin West, Chicago.
Treasurer—Dr. Austin A. Hayden, Chicago.
Speaker of the House—Dr. F. C. Warnshuis, Grand Rapids, Mich.
Vice Speaker—Dr. Rock Sleyster, Wauwatosa, Wisconsin.

All of which is respectfully submitted by

A. W. HORNBOGEN,
G. E. FROTHINGHAM,
H. A. LUCE,
J. D. BROOK,
Delegates.

COMMITTEE ON REGIONAL CLINICS

Regarding the meeting on April 25, 1924, of the special committee for the foundation of a regional clinic, I would submit the following report:

Those present were Doctors Walter Wilson, chairman, Warfield, Connor and McKean. The chairman outlined the purpose of the meeting by reading excerpts from members of the council in the February Journal of the Michigan State Medical Association. Dr. Warfield spoke on the plan which Wisconsin has adopted whereby under the University Extension Unit various men in different branches of medicine are lined up to lecture in towns here and there throughout the state, evening lectures being preceded by a general clinic. Dr. Connor cited a similar plan in vogue in the Carolinas and the necessity for some such plan being agreed upon in Michigan. It was recommended therefore that the matter might be handled by an extension division of the University of Michigan in collaboration with a committee from the State Medical Society. The subjects to be arranged, listed and assigned to different men who are to go out individually and take up a subject in which they are particularly qualified to speak.

It was considered that it might be feasible to make a charge of $25 for a series of ten clinics and lectures throughout the year, the men giving these clinics and lectures being reimbursed to the amount of $25 a day, plus their expenses, to pay them in part for the time expended.

It was further recommended that the plan of districting be left to the discretion of the Extension Division as mentioned above. It was suggested as an alternative that the whole work might very well be carried on by the joint committee of Public Health Education of the State Society.

Respectfully submitted,
Walter Wilson, Chairman.

Dr. Walter Wilson, Detroit, Chairman, moved that the report be accepted as printed and referred to the Business Committee.

Motion seconded and carried.

NEW BUSINESS AND RESOLUTIONS

Meeting Place

DR. GEORGE L. LeFEVRE, Muskegon: I think it well to extend an invitation to have the meeting at Muskegon in 1925, and hope you will accept. I also have here an invitation from the Chamber of Commerce and the Country Club. I know you had a meeting there some years ago and I have heard criticism from some of the members that Muskegon is situated on a hill and makes no progress, depending upon water for progress. (Laughter). Muskegon has grown. It has hospitals, and an hotel that will accommodate eight hundred people. We have places for section meetings, one that will contain four hundred and fifty, another that will contain two hundred and fifty, and we also have rooms at the Occidental Hotel that will hold a good crowd. The hotel rates in Muskegon are never raised because you have a meeting there. They are the same the year 'round and are very reasonable. The eating places are abundant, there are first class meals at all hotels and plenty of restaurants and high class cafeterias. We have plenty of cars to take care of all of you and we can guarantee the expense to the State Society will be normal.

We have plenty of facilities for amusement, for boat rides on the lakes, golf, or any other kind of entertainment you wish. The golf course is probably one of the best in the state. Warnshuis and Dodge will tell you that. They have lost money there, and may lose more. The roads to Muskegon are the very best. We have two trunk lines that are always paved When a convention comes to Muskegon we take the police force right off their beats. (Laughter.) Of course, there is one consideration, we hope you will observe the Eighteenth Amendment and not disgrace the medical profession of Muskegon by breaking it. (Applause.)

(Dr. LeFevre then read the invitations from the Chamber of Commerce and the Country Club.)

Dr. Brook, Grandville, moved that Dr. LeFevre's invitation be referred to the Council with the hearty endorsement of the House of Delegates.

Motion seconded and carried.

Dr. Hornbogen, Marquette, moved that the present Speaker of the House appoint a committee of three doctors from the Lower Peninsula to commend Dr. Bohn, who was Chairman of the Committee on Legislation.

Dr. Hornbogen explained that he wished this committee to be from the Lower Peninsula because the Upper Peninsula had already taken care of the matter, not only by the appointment of a committee, but by electing Dr. Bohn as President of the Upper Peninsula Medical Society.

Motion supported by Dr. Stewart and carried.

Speaker Moll thereupon appointed the following gentlemen to serve as such committee:

Dr. D. Emmett Welsh, Grand Rapids.
Dr. D. B. Harrison, Detroit.
Dr. C. D. Aaron, Detroit.

As this completed the business before the

House at this time the meeting was declared adjourned until 8:15 Wednesday morning.

THIRD SESSION

The third session of the House of Delegates of the Fifty-Ninth Annual Meeting of the Michigan State Medical Society was called to order in the Methodist Church, Mount Clemens, at 8:30 a. m., on Wednesday, September 10, 1924, by the Speaker, Dr. Carl Moll, Flint.

ROLL CALL

The Secretary announced that he held in his hand the signed roll of a majority of the House of Delegates and moved that this constitute the roll call for this session. Motion seconded and carried.

The Speaker then announced that a quorum was present and declared the House duly constituted for the transaction of business.

REPORTS OF COMMITTEES

Business Committee

Dr. W. T. Dodge, Big Rapids, Chairman, stated that the Committee had been unable to review all the reports that had been submitted to it, and asked for more time in which to prepare a report.

Dr. J. A. Kimzey, Detroit, moved that instead of meeting at 8:00 a. m., on the second day of the meeting in the future, the meeting of the House be held at 4:00, or 4:30 p. m., on the second day.

Motion seconded and carried.

Dr. F. C. Warnshuis, Grand Rapids, moved that the Speaker appoint the Business Committee fourteen days before the Annual Meeting, and that the reports be sent to the Committee beforehand so that they might be prepared to report at the first meeting of the House of Delegates on the reports as printed.

Motion seconded and carried.

As nothing further could be done at this time, the Speaker declared a recess of the House of Delegates until 4:00 p. m.

FOURTH SESSION

The fourth session of the House of Delegates of the Fifty-Ninth Annual Meeting of the Michigan State Medical Society was called to order in the Methodist Church, Mount Clemens, at 4:10 p. m., on Wednesday, September 10th, 1924, by the Speaker, Dr. Carl Moll, Flint.

ROLL CALL

The Secretary announced that he held in his hand the signed roll of a majority of the House of Delegates and moved that this constitute the roll call for this session. Motion seconded and carried.

The Speaker then announced that a quorum was present and declared the House duly constituted for the transaction of business.

REPORTS OF COMMITTEES

Business Committee

Dr. W. T. Dodge, Big Rapids, Chairman, presented the following report:

The adoption of the new Constitution and By-Laws has largely brought into effect the recommendations of the Speaker in his annual address. It has also largely adopted the recommendations made by the Council in its reports.

We therefore recommend that the Council appoint an Executive Secretary, as soon as they have found one who will fit the place.

In taking up the report of the committees printed in the transactions and referred to us, we will commence with the report of the Committee on Tuberculosis.

We especially endorse the recommendations of this Committee and recommend that this body commend the work of the Tuberculosis Association and co-operate with them.

The Committee on Public Health recommends special work to be done to insure frequent vaccinations against smallpox, the use of antitoxin for the prevention of diphtheria, and the use of iodin which has already been adopted as measures to prevent the development of goitre.

The Committee on Civic and Industrial Relations present many problems for consideration, and among others are presented the old time discussion of university hospital work in treating patients with or without fees. The Committee also points out the tendency they have discovered to charge excessive fees for preventive inoculation and for the removal of tonsils and other work of a preventive nature.

We have found that the adoption of regulation for the fees to charge for this work would be quite impossible. We believe the only thing to do is to leave the performance of work of this kind by the university hospital and the fees for such services as may be done by individuals, to the option of the individuals themselves.

We, however, advise that information concerning this point be brought to the attention of the university hospitals, and that they be urged to make their regulations of such nature as not to interfere in the general practice of medicine.

The last portion of the report of the Committee on Civic and Industrial Relations recommends that a resolution be adopted relative to the activities of public health departments.

We, therefore, recommend the adoption of the following resolution:

"RESOLVED, That the profession as represented by this Society endorse the action of the Public Health Department as illustrated by the purely educative work it is doing. This specifically endorses the work of public clinics, distribution of public health documents, and the

activities of visiting nurses. We endorse all educational work, and we expect the Public Health Department to adhere as closely as possible to the education and preventive side of medicine, and not encroach on the field of the practicing physician."

The Committee on Venereal Prophylaxis makes an interesting report that shows a gradual progress in this work, but makes no recommendations that require consideration at your hands.

The Committee on Goitre has performed very valuable services; they have secured the adoption of iodid salt which is now being sold in all the grocery stores in the State.

We recommend the adoption of the following resolution:

"RESOLVED, That .02 per cent of iodin or its equivalent in salt is a normal quantity and is endorsed by the action of this Association."

The Committee on considering the matter of private examinations of individuals, makes a recommendation that a committee be appointed to see that a system of examinations be outlined by the Michigan Tuberculosis Association be adopted, and we recommend that the incoming President be authorized to appoint this Committee.

The report from the delegates of the A. M. A. shows that they devoted considerable time and attention to the purpose for which they were appointed.

We especially commend that a tribute be paid to the member of their delegation who has been honored in being chosen as Speaker of the House of Delegates of the American Medical Association.

We recognize the happy relations that seem to exist among the delegates from Michigan and hope that this spirit of harmony and pleasant relationship may continue, and work for the ultimate advantage of Michigan in the management of the American Medical Association.

We do not think that any instructions to these delegates are necessary; they are quite active and have the future of Michigan well in their hands.

Respectfully submitted,

W. T. Dodge,
L. W. Toles,
E. B. Minor,
C. T. Southworth,
H. A. Luce.

The Secretary then read this report, section by section, and the following action was taken:

Section 1, regarding appointment of executive secretary, upon motion duly seconded and carried, was adopted.

Section 2, recommendation regarding Tuberculosis Association, upon motion duly seconded and carried, was adopted.

Section 3, recommendations on Committee of Public Health, upon motion duly seconded and carried, was adopted.

Section 4, resolution regarding Committee on Civic and Industrial Relationships, was discussed. A substitute motion was made that the words "activities of visiting nurses" be stricken out and this Section of the report as thus amended be adopted.

This motion was seconded and carried.

Section 5, venereal prophylaxis, the Secretary stated, required no action.

Section 6, resolution of Committee on Goitre, upon motion duly seconded and carried, was adopted.

Section 7, regarding periodic examinations, Dr. Den Bleyker, Kalamazoo, moved that the words "Michigan Tuberculosis Association" be stricken out and "American Medical Association" substituted.

Motion seconded and carried.

The Section thus amended, on motion duly seconded and carried, was adopted.

Section 8, delegates to American Medical Association, upon motion duly seconded and carried, was adopted.

NOMINATING COMMITTEE

Dr. J. D. Brook, Grandville, presented the following report:

First Vice-President, Dr. Henry J. Berry, Mount Clemens.

Second Vice-President, Dr. F. W. Garber, Muskegon.

Third Vice-President, Dr. Henry Cook, Flint.

Fourth Vice-President, Dr. Harvey Miller, Gladstone.

Delegates to A. M. A.—Dr. A. W. Hornbogen, Marquette; Dr. J. D. Brook, Grandville; Dr. G. E. Frothingham, Detroit; Dr. F. C. Warnshuis, Grand Rapids.

Alternate Delegates—Dr. Carl Moll, Flint; Dr. Hugh Stewart, Flint; Dr. H. A. Luce, Detroit; Dr. C. S. Gorsline, Battle Creek.

Upon motion duly seconded and carried, a unanimous ballot of the House of Delegates was cast for these gentlemen and they were declared duly elected to their respective offices.

The Secretary stated that only one delegate was present from the 13th District, that he had complied with the requirements of the Constitution and By-Laws insofar as possible, and that this delegate had presented the name of Dr. B. H. VanLeuven of Petoskey, as a Councilor from the 13th District.

Dr. F. G. Swartz, Traverse City, moved that the House receive the report of this delegate.

Motion seconded and carried.

The Secretary then presented the nomination of Dr. B. H. VanLeuven of Petoskey, as a Councilor for the 13th District.

Dr. Hornbogen, Marquette, moved that the

Secretary be instructed to cast a unanimous ballot for Dr. VanLeuven.

Motion seconded and carried.

The Secretary reported the ballot cast and Dr. VanLeuven was declared duly elected as Councilor from the 13th District.

Nominations for Speaker and Vice-Speaker were then made from the floor of the House and the following gentlemen were duly elected:

Speaker—Dr. Joseph E. King, Detroit.

Vice-Speaker—Dr. W. J. O'Reilly, Saginaw.

NEW BUSINESS

Dr. Gorsline, Battle Creek, asked if the officers of the Society had some well conceived plan of education and action which could be put over, whereby the County Societies could be shown why the raise in dues was necessary, and what benefits they would derive from this plan.

The Secretary announced the tentative plans that had been outlined by the Council for the benefit of the members of the Society, and stated that the selection of an Executive Secretary was left to a special committee, and that they hoped to secure a suitable man by January 1st.

Dr. Brook, Grandville, moved that the House of Delegates, on behalf of the Michigan State Medical Society, extend a vote of thanks to the local profession, to the citizens of Mount Clemens, to the Business Men's Association, and to all others interested for the courtesy and hospitality shown to the members of the Society, especially to the members of the Macomb County Society.

Motion seconded and unanimously carried.

Dr. Gorsline, Battle Creek, moved that the House of Delegates extend a vote of appreciation to Dr. Moll for his services as Speaker in the last two years, and for the able way in which he had presided over the House and conducted the activities and deliberations of that body.

Motion seconded by several and unanimously carried.

As Dr. King was not present at this meeting it was impossible to induct him into office.

As this concluded the business, on motion duly seconded and carried, the House of Delegates was declared adjourned *sine die*.

F. C. WARNSHUIS,
Secretary.

SOME SPECIAL FEATURES OF MASSACHUSETTS' PROGRAM FOR VENEREAL DISEASE CONTROL

The organization, personnel and general policies of the subdivision of venereal diseases of the Massachussetts Department of Public Health are detailed by Eugene R. Kelley and Albert Pfeiffer, Boston (Journal A. M. A., Sept. 20, 1924). There are some features of the Massachusetts program which are strictly within the proper provision of a state health department's activities and yet which may not be generally known or widely followed in other states. Kelly and Pfeiffer present illustrations of these special activities, which fall roughly into the following classes: Curative, repressive, law enforcement, and, generally speaking, educational, with the hope that their experience may be of value to other departments of health. They are: 1. The manufacture and distribution of arsphenamin and analogous products. 2. Work among the pharmacists in reference to nostrums. 3. Co-operation with the courts. The fact that special legislation is not always necessary to carry out health measures is forcefully shown by the campaign conducted by the department against proprietary and quack remedies sold by druggists for the self-treatment of venereal diseases. It was thought advisable to have a special investigator of the department visit each druggist in the state, explaining to him in detail the department's program in venereal disease control. The prevalence, dangers of home treatment, and complications of venereal disease were outlined, and the necessity of thorough and scientific treatment emphasized. The druggist was then asked to co-operate with the department by refusing to carry in his drug store any nostrums for the treatment of venereal diseases. The pharmacists almost to a man were found to be interested and highly co-operative, and in most cases were unaware of the activities that were being conducted toward venereal disease control. As a general thing, these men had not given thought to the consequences of badly treated cases, or realized that they were instrumental in decieving the unfortunate victim, leading him to think that his misfortune was slight, and easily and speedily cured by the taking of some highly advertised concoction. Only a few of those visited failed to respond, giving as an excuse that they would co-operate if all others would do the same. On a return visit, these invariably fell into line. A list of the state approved clinics, where patients can receive free treatment if they are unable to pay a physician, was always left with the druggist so that he might refer persons who might inquire about facilities for treatment. The wholesale drug houses were visited, and usually the general manager or vice president who was seen asked for a list of these preparations so as to discontinue stocking them. In the fall of 1919, a representative of the department was given the task of visiting each of the courts of the state to discuss the policy of the department in the control and suppression of venereal diseases, the prevalence and importance of venereal diseases, the location of the established clinics for free treatment, and to ascertain whether, with present legislation, the court officials could properly make an effective disposition of all sex offenders and those coming before their courts accused of offenses against chastity. The survey was highly satisfactory. Most of the courts in the state responded favorably. The policy of some courts is to have the case continued so that the defendant can be examined, the probation officer having the custody. Some judges have taken the stand that a refusal of medical examination is a sign of guilt, and therefore do not hesitate to impose a sentence of thirty days in the house of correction, thus insuring a thorough physical examination. Some courts have attending physicians; others request physicians, often from established venereal disease clinics, to advise them or to examine defendants. The local boards of health assume responsibility for the expense of examination, or the expense is paid from the probation officers' funds, but no court is left with this difficulty unsolved. Results from the revisiting of about a dozen or more courts showed that, out of 1,500 sex offenders who had been examined, 605 were found to have venereal disease.

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PUBLICATION COMMITTEE
R. C. Stone, Chairman.....Battle Creek
C. D. DARLING.....Ann Arbor
J. D. Bruce.....Saginaw

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OCTOBER, 1924

Report Malpractice Threats Immediately to Doctor F. B. Tibbals, 1212 Kresge Building, Detroit, Michigan.

Editorials

WHY INCREASE OF DUES?

We anticipate that the first query that will be made when our members learn that the House of Delegates at the Mount Clemens meeting amended our Constitution and By-Laws and provided for an increase of our annual dues from five dollars per year to ten dollars per year, effective on January 1, 1925, will be, "Why?" To partly answer that inquiry is the purpose of this editorial. We request, and the Council directs, that this information be imparted to every member and that County Secretaries and officers likewise undertake to place this information before their members.

What is the justification for this increase in dues? If the State Society and the component County Societies are content to continue having our State and County organizations represent as their sole object and purpose of existence, the maintenance of a Society that has for its only object, membership, casual meetings, the publication of The Journal and Medical-Legal Defense, then it is conceded and admitted that there is no need for an increase in dues. If we are to remain semi-dormant and content ourselves simply with the continuance of a plan of organization that is unconcerned with the great problems of public health, health conservation, public health education, the enlightenment of the people as to the truths regarding scientific medicine, the professional and scientific enhancement of our members, the conservation of professional and personal attainments, the inspiring of our members to better medical investigations, the rendering of more efficient medical services by our members, the guidance of local and state authorities along lines of legislation in order that the welfare and health of our people may be conserved, morbidity reduced and mortality lowered—if as an individual doctor and as a member of your County and State Society you are of the opinion that these present day problems are of no concern to you and that as a Society we have no relationship to them and that the responsibilities that they involve are not the concern of you and your fellow doctors, then we again agree that there is no need for an increase in dues.

If you are of the opinion that it is well and wise for us to keep on "marking time" as we have been doing for the past five or more years, if you are content to make no progress, if you are willing to have a stagnant, non-achieving, non-constructive Society, if you believe that a Journal and Medico-Legal Defense should be the sum-total of your membership benefits, if you hold that the profession should not concern itself with the problems that passing events and changing public relationships thrust upon us—if that is your opinion, belief and desire and the inclusive end of our medical organization and that is the type of a Society that you wish to be affiliated with and sponsor, then again do we agree that there is no need for an increase in dues.

But, (and we say it loud, long and with emphasis)—But, if you are of the opinion and belief and there exists within you a commendable degree of desire to meet up to your responsibilities and to be affiliated with a Society that represents a constructive, aggressive and progressive body of Michigan doctors, then there is need and justification for increasing our annual dues on the following grounds:

1. Our present income will not permit us to undertake new activities or broaden our present scope of effort. Our present annual dues are distributed as follows: Two dollars to the Journal subscription, two dollars to medico-legal protection, one dollar toward defraying Society expenses and annual meeting expenditures.

It costs an average of four dollars per year to send each member The Journal. You contribute two dollars toward it and the balance must be earned by advertising. The Journal has shown an annual profit of $1,000 to $1,500 per year, but because of Society expense this

profit has been used to overcome an annual deficit. It has been impossible, therefore, to enlarge The Journal and cause it to contain a larger and more varied number of original articles that will interest and be of profit to our members. If the Journal's earnings can be expended on The Journal it will result in a better and more valuable publication. An increase of dues that will provide for defraying Society expense will make possible a bigger and better Journal.

That is benefit number one that you will receive from an increase in dues.

2. Active, aggressive County Societies, holding regular, well attended meetings with scientific programs that are instructive and profitable, begets a membership and interest that pays a dividend that no earnest doctor can afford to forego. County officers are as a rule willing and desirous of serving their constituents. Their task is a difficult one. They stand in much need of assistance. They should receive aid and co-operative assistance from their parent State Society. With our present state income this type of assistance cannot be accorded to County Societies. With an increased state revenue derived from increased dues it will be possible, and it is the purpose of the Council and State Officers, to render this assistance to every County Society. Tentative plans include the sending into each county, groups of County Societies and Councilor Districts, essayists, clinicians, and teams of clinical teachers to conduct meetings and post-graduate clinics for the benefit of our members. Such plans and that type of educational work should and will result in a statewide awakening and activity on the part of County Societies. It will mean County Societies reflecting the true purpose of their existence. Increased dues will bring to you, this benefit number two, in the form of live, active, purposeful County Societies.

3. Our Constitution and By-Laws provide for a number of permanent committees. The duties of these several committees are also prescribed. Their membership is composed of members appointed by the president. To perform the duties prescribed, to attain the ends set forth as being desirable, to accomplish the work that is assigned requires time, effort and expense.

Many members have unselfishly contributed their time in the past and many have expended personal funds to further their committee work. Notwithstanding, there is always a limit to self-sacrifice and in that degree is our committee work limited and the attainments restricted. These committee members do not work for self or for selfish purposes. They labor in your behalf, your interest and your advancement. They serve to serve you and the public. When they thus contribute their time and labor it is not fair, equitable or right that you or your State Society should expect and cause them to pay the expense that is entailed by reason of their work and attendance upon committee meetings and deliberations. Committee members working in your behalf and in the interest of your personal welfare should be remunerated for the actual money they expend in travel. It is the opinion of those competent to judge that if a fund is provided for each committee to defray its actual expense, the purpose for which they were created, the results that they will attain and the state-wide benefits that will accrue will be realized in a full and commendable degree. You will personally profit by the results. An increase in dues will make this possible. Benefit number three that will come to you individually from an increase in dues will consist of active, state committees producing desired results.

4. It is not necessary to set forth reasons as to why we have definite responsibilities pertaining to the education of the public in regard to the established facts and truths of scientific medicine. A definite duty rests upon the profession as a whole and upon every individual doctor. We cannot shirk this responsibility. We dare not continue to fail to accept this task. We can find no just reason as to why we should decline to direct and carry on this educational movement. Our Joint Committee on Public Health Education has initiated the work. Its committee members have commendably contributed their time, thought, effort and personal funds. They have but barely laid a foundation. We refer each member to their annual report as contained in this issue. Their corps of speakers have carried on in a splendid manner. They are working for you as an individual and you profit from their work. They contribute their time when they fulfill their lecture engagements. It is not fair or equitable to ask or expect that they should pay from their own funds travel expense. An increase in dues will enable the State Society to reimburse them for their travel expense and will also enable the Joint Committee to extend and expand its work. The benefit that you will receive will be the acquitment of the profession in regard to this responsibility that you as a doctor and the Society as a whole owe to the public in enlightening them as to modern, scientific medicine and dispelling their ignorance as to vague, nebulous and untenable theories. That will be benefit number four.

5. As a Society and as individual doctors we have a responsibility and we owe a duty to the legislative bodies of our communities and state in advising them regarding the provisions and regulations that are proffered for enactment for the conserving of public health and the application of health principles. We do

not refer to selfish or base ends. To so serve, to so contribute to the health welfare of the public we must provide for committees and conferences. Such committee men serve you and they, too, should be reimbursed for the actual expense incurred. Increased dues will create such a budget and your fifth benefit will be the satisfaction and knowledge that will be yours individually and the Society's as a whole that you have met up to the spirit of the times and have contributed to secure sane, constructive, conserving health and medical legislation that is for the ultimate benefit and profit of the people of Michigan.

6. Every worth while and effective organization must have a directing head. There must be one individual who will direct and supervise the organization's activities and bring about a uniform application of effort. What is everybody's business is nobody's business, and when a balance is determined, the end result is not what it should have been. When our scope of effort was somewhat limited and our purposes of organization were not so diversified, our present plan of supervising officers was fairly, though never wholly, satisfactory. Some ten years ago your Secretary-Editor indicated and recommended the securance of a full-time Executive Secretary. That recommendation was concurred in and reiterated by Dr. Reuben Petersen during his term as president. We have repeated it on numerous subsequent occasions. Such a full-time Excutive Secretary was not possible because of insufficient funds. A full-time Executive Secretary will be able to visit every county in the state and not spend a few hours, but days in each county. He will be able to aid in building up County Societies, increasing county activity, solving county problems and ironing out county difficulties, inspiring a constructive program of county accomplishments, increasing membership and a host of similar county activities. He will enhance and enrich the value of our Society as a whole and will up-build our county units. Such an official will be an inspiring, accomplishing, executive head for our State Society. In a subsequent editorial we purpose to outline in extensive detail all the results that will be possible if we secure a full-time Executive Secretary. For the present we assure you that the sixth benefit that will ensue from increased dues will be a revived, energy-radiating State and County Society in which the benefits that will come to you will be a hundred fold greater than the annual dues that you pay. A moment's reflection will reveal the potent benefits and possibilities that will be yours when the services of a full-time Executive Secretary is available.

The Council has discussed and has in mind other policies and plans that it purposes to institute and which will only be possible when added revenue is made available by reason of increased dues. We shall discuss them in subsequent issues of The Journal. For the present we urgently request that you give considerate and constructive thought to the reasons enumerated. In doing so we feel certain that you will coincide with the final conclusion that the House of Delegates acted wisely in increasing the annual dues to provide funds that are so necessary in order that the Society may meet its obligations. It must be evident that added funds are vitally necessary. It is conclusively apparent that to progress, additional revenue is requisite.

The increase is a five-dollar increase over our present dues. The entire amount will be appropriated entirely to Society work and work that is directed to benefit the public and the individual member. This increase represents an added monthly increase in dues of *forty-three cents.* The annual dues of $10 represents a monthly rate of *eighty-three and one-third cents!* That is not an amount that merits much talk or bickering. It is an amount that is ridiculously small. It is an amount that quadruple our activity. We do not believe that there is any doctor, any reputable medical man that cannot afford to pay *eighty-three cents* per month to support his State Society. It cannot entail a hardship. It is a mighty small assessment that is placed upon you to support the parent state organization of your profession. It is an amount that you spend foolishly, several times each week. It is an amount that belittles and rejects all possible real or fancied objections. We do not believe that you will want to reply, when asked, "That you dropped out of the ranks and resigned your membership in your County and State Medical Societies and relinquished your affiliation with the American Medical Association because the *monthly dues were eighty-three cents.*" What club, lodge, group or organization do you belong to, take pride in, profit by reason of your membership and support, that requires so low a membership fee? What organization can or will do more for you and your professional life than your County and State Medical Society?

Yes, we are aware that in addition to this eighty-three cents per month you also must pay your local, County Society dues. These vary from one, two, three, five, ten and fifteen dollars additional. Thirty per cent of our members will be called upon to pay a total of *twelve dollars* per year medical dues—*one dollar per month.* Forty per cent of our members will be called upon to pay *fifteen dollars* per year—*one dollar and twenty-five cents per month.* Thirty per cent of our members, the Detroit doctors), will pay *twenty-five dollars* per year, medical dues—*two dollars and nine cents per month.* Is this exhorbitant, unreasonable, a burden, or oppressive? We believe

not. If there be any that think so, we urge that they openly advance their reasons.

There will possibly be those who will say, "This increase in dues is right," "this increase of dues is not a burden," "this increase in dues is satisfactory." "I can afford this increase," "I am for this increase in dues"—BUT—"How do I know that this increased income is going to be spent and will be used to carry out the plans and purposes outlined?" Our answer is: You have the word and the integrity and honor of your chosen officers as assurance. An accounting is made annually. Reports of accomplishments are published frequently. You will be able to perceive the results in your own county. Can any one demand or expect greater assurance?

As has been intimated, the Council has directed that the Editor shall set forth these reasons that justify this increase in dues. The Council further directs that pertinent inquiries shall be frankly answered, that just criticisms, if there be any, shall be imparted and answered and that every member shall be fully enlightened upon the subject. The Secretary-Editor invites such requests and inquiries and pledges to place full information in the hands of every inquirer.

The Councillors request and urge County Officers to acquaint their members with these facts and with the above information. Delegates who were present at the Annual Meeting in Mount Clemens are requested to report to the members whom they represented and impart to them as to why they voted for an increase in our annual dues.

We have that pride, that faith and that full degree of confidence in the men, members, County Societies and doctors in Michigan that when they are advised as to the whys and wherefores and the actual purposes that caused the advancement of our annual dues, that the action of the House of Delegates will receive unanimous endorsement and support. We are firm in the confidence and conviction that the medical men of Michigan will accept and willingly rise to the occasion to thus support their State Medical Society and cause it to assume, maintain and advance the true objects of our Society in serving the people of Michigan. As members of the Medical profession in Michigan, and standing out before the people of our State and nation, we are confident that there will be a unanimous endorsement of this step that will record a new era of commendable, constructive, progressive accomplishments in the history of our State Medical Society.

THE MOUNT CLEMENS MEETING

The 104th Annual Meeting (59th since reorganization) has become a part of the official records and history of our Society. The meeting was an epochal one in our organizational life and pronouncedly recorded a distinct advance in our march of progress. The action taken by the House of Delegates definitely declared that the medical profession of Michigan recognizes its responsibilities and duties to themselves and to the public. The Society seriously assumes these duties and sets forth, by definite action, to accomplish their consummation.

As an organization of medical men, passing events, civic progress and our relationship to an awakening public sentiment, we are confronted with new and ever increasing responsibilities and demands. If we are to meet up to these present-day problems if we are to accept the mandates of the times, and if we are to acquit ourselves of the obligations they impose, then it becomes imperative to formulate policies and determine methods whereby we, as an organization may be enabled to undertake the work that is thrust upon us. Should we as a profession manifest indifference, neglect these obligations and content ourselves with an attitude of somnolence, then the day would not be far distant when justification for continued organizational existence would cease to be evidenced.

We are delighted to be able to record that the Delegates were not unconcerned. We congratulate them and the members whom they represented because they were alert to the situation and because they instituted ways and means for advancement and progress in our organizational activities and life.

Summarized, these new measures may be recorded as follows:

(a) Providing of funds by increasing the annual dues to $10.00 per year.

(b) Providing for means whereby a full time, executive field Secretary, working under the direction of the Council and the Secretary-Editor, may be secured.

(c) Providing means whereby the Council may institute post-graduate clinical instruction for the benefit of our members by conducting them in the District and County Societies.

(d) Providing for the continuation and extension of the work of the Joint Committee on Public Health Education and its corps of speakers.

(e) Enabling the Council to increase the scope, value and size of The Journal.

(f) Creating plans and policies that will increase the value of membership and contribute to each member a greater return and benefit of membership.

(g) Enhancing the prestige and educational influence of the Society, thereby causing it to become potent for public and civic good.

These are the outstanding features of our progressive movement and increased organiza-

tional activity. We refer our members to the official minutes and editorials in this and subsequent issues of The Journal.

The official registration of the Mount Clemens meeting was 462. This number does not represent the actual attendance for the reason that a goodly number of members residing in Detroit and the surrounding territory attended the meetings of the Scientific Sections, driving in and home each day without registering. It may be reasonably estimated that 600 members participated in the meeting's activities.

The profession of Mount Clemens, under the leadership of President Folsom and Secretary Wolfson of the Macomb County Society were entertaining hosts, ever solicitous of our comforts and interests.

For the first time in fourteen years it was necessary to open a ballot box for the election of a President. Two candidates were placed in nomination for the office of President in the persons of Doctors W. K. West of Calumet, and C. C. Clancy of Port Huron. Both candidates were of splendid presidential calibre. This friendly, spirited, good natured and wholesome campaign resulted in the election of Dr. C. C. Clancy of Port Huron as President by a vote of 171 to 118. The other officers elected were as follows:

VICE PRESIDENTS

1st Vice-President, Dr. Henry J. Berry, Mt. Clemens.

2nd Vice-President, Dr. F. W. Garber, Muskegon.

3rd Vice-President, Dr. Henry Cook, Flint.

4th Vice-President, Dr. Harvey Miller, Gladstone.

DELEGATES TO A. M. A.

Dr. A. W. Hornbogen, Marquette; Dr. J. D. Grook, Grandville; Dr. Geo. Frothingham, Detroit.

ALTERNATE DELEGATES TO A. M. A.

Dr. Carl Moll, Flint; Dr. Hugh Stewart, Flint; Dr. H. A. Luce, Detroit; Dr. C. S. Gorsline, Battle Creek.

The following members of the Michigan State Medical Society were elected as Section Officers:

SECTION ON GENERAL MEDICINE

Chairman—Dr. Frank J. Sladen, Detroit.
Secretary—Dr. C. F. Kashner, Grand Rapids.

SECTION ON GYNECOLOGY AND OBSTETRICS

Chairman—Dr. Howard Cummings, Ann Arbor.
Secretary—Dr. A. E. Catherwood, Detroit.

SECTION ON LARYNGOLOGY

Chairman—Dr. John G. Huizinga, Grand Rapids.
Secretary—Dr. B. N. Colver, Battle Creek.

SECTION ON SURGERY

Chairman—Dr. J. Walter Vaughan, Detroit .
Secretary—Dr. A. C. Blakeley, Flint.

SECTION ON PEDIATRICS

Chairman—Dr. David M. Cowie, Ann Arbor.
Secretary—Dr. R. M. Kempton, Saginaw.

SECTION ON PUBLIC HEALTH

Chairman—Dr. Charles Allen Neafiie, Pontiac.
Secretary—Dr. R. C. Stephenson, Flint.

The scientific programs were of exceptional interest, merit and value. Section officers merit unstinted credit for their time and labor spent in the preparation of these programs and conducting of sectional meetings. In conformity to custom, the papers read will be given preference and will appear in early issues of The Journal.

We have thus endeavored to set forth a brief comment of our annual meeting proceedings. We purpose commenting in extended detail upon each feature in subsequent issues. We urge that our members determine now to be interested in these reports and the information that will be imparted revealing the expansion and progress of our Society's achievements and the meeting up to the demands that the present day responsibilities place upon us.

To attain these ends we solicit a renewed subscription of your individual interest and assistance. It is only by concerted effort that we will be enabled to attain the ends sought. We request this interest and co-operation from you.

NEW MEMBER OF THE COUNCIL

Upon his election to the office of President, Dr. C. C. Clancy of Port Huron, resigned as Councilor from the 7th District.

In accordance with our Constitution and By-Laws, the President has appointed Dr. A. J. MacKenzie of Port Huron to succeed to the office for the unexpired term. The appointment has been approved by the Council and Dr. MacKenzie will therefore assume office immediately representing the 7st District.

NEW CONSTITUTION AND BY-LAWS

The amendments that were adopted at Mount Clemens provided for a revision of our Constitution and By-Laws. It was impossible to compile and correlate these changes in time to publish them in this issue. We hope to do so and shall cause them to appear in our November issue.

The changes that were made provide us with a Constitution and By-Laws that will enable our Society to achieve better and greater results from our organizational activities.

ORIGINAL ARTICLES

From time to time we receive original articles submitted for publication. At times we are compelled to return them for the reason that they are not suitable for publication. This is an unpleasant duty because it frequently inspires an enmity and unkindly feeling on the part of the author.

In view of this we believe that it is timely to set forth the desired features and quality that cause a paper to be appraised and passed as suitable for publication. Before doing so, permit us to briefly set forth the different classes of readers we must cater to. They are the men who are engaged in the practice of general medicine and surgery, and that other

class of practitioners who limit their work to one of the some ten lines of specialties. In general, in each issue we must include such original articles so as to provide one article that will interest members of the six general major divisions of medicine and surgery. These are our readers.

Our long established guide has been that an original article must not be a compilation of what other authors, writing on the same subject, have previously said or written. Neither should it be a compilation of text book statements. The exception, however, exists that such compilations are pertinent and germain when the writer includes a series of case histories and results which corroborate the quoted texts that he submits to establish the conclusions he reaches.

In general, an original article should impart either: personal investigations or observations, personal researches, studies of a given number of cases, methods of diagnosis, laboratory work, treatment results in a given number of cases and the writer's personal opinions, recommendations and conclusions. The article then becomes an original contribution on the part of the author and imparts his personal observations, work and results. It possesses in itself intrinsic merit. It is not a review of what another has said or written.

Failure to observe these basic requisites is the principal cause for declining to publish an original article.

Frequently, and very properly, a member selects a subject and spends much time and labor in reviewing the literature and quoting the conclusions of authorities upon the subject. His paper splendidly sets forth present day opinions on the subject. It is an excellent review but incorporates nothing as to his own personal experiences or results. It is a paper that he reads before his County Medical Society and he thereby acquaints his fellow members with the latest authoritative information on the subject and serves his fellow members by imparting that information. It is a type of paper well chosen for County Society presentation. The members appreciate it and often they voice their appreciation by moving that it be sent to The Journal for publication. Then there is created the embarrassing situation for the Publication Committee because the article does not possess the requirements established for original articles.

It is an article that will not serve the desires of our readers. It is an article that contains nothing but what has been printed in other Journals or text-books and so fails to come under the classification of original articles.

We trust that our members will perceive this fact and also recognize why The Journal cannot keep reprinting extracts and compilations and serve its entire list of readers.

Individual case reports, individual experiences, individual, isolated cases are solicited and their submission for publication are urged. We cannot, however, unless in isolated exceptions, accept as original articles those papers that do not contain individual or personal findings. In brief—"quoted extracts," compiled in form, is not an original article—it is a review.

President C. C. Clancy
1924-1925

By the registered preference of our members, Dr. C. C. Clancy of Port Huron was elected President of our Society for the year

CHARLES C. CLANCY, President
1924-1925

1924-1925, at our Annual Meeting in Mount Clemens.

Dr. Clancy was born in 1858 in Ontario and received his education in Assumption College. He graduated from Queen's University Medical School in 1883, and located immediately in Port Huron, where he has been continuously engaged in medical practice. He has been affiliated with his County, State and American Medical Associations since the reorganization in 1902.

During the past four years he has been a member of the Council of our State Society. During the war he was a member of the St. Claire County War Board. He has always been an active, interested participant in the affairs of his home city and enlisted in every

movement that purposed community interests and welfare.

Pleasing in personality, keen in judgment, fair minded and favoring honesty and intrinsic merit, forgetful of self, while seeking the good of the group and inspiring nobility of purpose and zeal, Dr. Clancy possesses outstanding qualities that command esteem and respect. We are honored in having him as our President. We are assured that he will concern himself to further the best interests of our Society.

We believe that the Referendum seeking to establish a State Income Tax law is of vital importance and interest to every member. To acquaint you with its features and purposes we are publishing the following pertinent editorial that appeared in the Grand Rapids Herald:

THE PENDING MICHIGAN STATE INCOME TAX CONSTITUTIONAL AMENDMENT IS A MONSTROSITY THAT MUST BE DEFEATED

The welfare of Michigan demands that the electorate should be thoroughly informed regarding the State Income Tax Amendment to the Constitution which the Michigan State Grange has initiated and which will be voted upon by the people next November. This Amendment proposes to start a 5% State Income Tax on incomes of $4,000 to $20,000 and finish it at 10% on incomes over $100,000. It eliminates all incomes under $4,000 for the frank purpose of "getting votes" from the multitude, which, presumtively, will be willing to favor concentrating this State Income Tax on 33,000 people out of 4,000,000. This is an appeal to sordid cupidity, but not to justice and fair play in taxation—a principle upon which America was founded. It pretends to offer itself as a partial substitute for the General State Property Tax by providing that the Income Tax proceeds shall be deducted from the total of Legislative appropriations before the balance is spread on general property; but it guarantees nothing in this respect because the General Property Tax will remain and the Legislature can use these funds as it sees fit. The Herald believes in and will support a legitimate State Income Tax Amendment. But it believes that this pendidng proposal is without a shred of justification and that it must be defeated (1) because it undertakes to write the details of a tax law into the Constitution where not a single percentage can be changed without a vote of the people, no matter how impractical or fatal some of this arithmetic may prove to be; (2) because it is not a guaranteed substitute for other forms of taxation; (3) because it is grossly "class legislation," which would be more likely to drive large incomes out of Michigan than to encourage their use in Michigan; (4) because a tragic failure, such as we believe this would be, would hazard the popularity of the whole Income Tax Principle (the soundest of all tax principles). The Herald regrets to disagree so emphatically with its long-time friends of the Michigan State Grange. But it believes that the Grange is wrong—and that the time will come when the Grange will thank us for saving it from fatal error.

Thirty-three States have no State Income Tax Law. Fourteen States have some form of a State Income Tax Law. Only nine of these are of a sufficiently general and established nature to be useful for comparison. Five of these States start the tax on incomes of $1,000 (for single folk) and $2,000 (for married folk) One starts at $1,000 for both. One starts at $800 and $1,200. One starts at $1,000 and $2,500. One starts at $3,000 and $4,000. This Michigan proposal makes no exemption discrimination between single and married taxpayers, but starts on all at $4,000. It starts, in other words, at a *higher* point than any other State Income Tax Law in America.

Among these other nine states, the initial Income Tax percentage starts as follows: Arkansas, one mill; Oklahoma, seven and one-half mills; New York, Oregon, Virginia, Wisconsin, North Dakota and Delaware, one per cent; Missouri, one and one-half per cent. This Michigan proposal would start at five per cent —a *higher* point than any other State Income Tax in America.

Among these other nine States, the highest Income Tax percentage on any income runs as follows: Arkansas, one mill; Missouri, one and one-half per cent; Oklahoma and Virginia, two per cent; New York and Delaware, three per cent; North Dakota, Oregon and Wisconsin, six per cent. This Michigan proposal goes to ten per cent—a *higher* point than any other State Income Tax in America.

The Herald believes these statistics are approximately correct. They have been checked to the best of our ability in a long and careful survey. If there are any differences they are of minor import.

These statistics show that the Michigan proposal is without a single precedent in all the history of State Income Taxation in the United States. They prove that the Michigan proposal is wholly and completely an economic experiment, without one single justifying precedent. Nobody knows how these excessive exemptions and these excessive percentages would work—not even those Grangers who drew this Amendment without accepting the recommendation of other State Income Tax Laws in other States.

Yet—though it is obviously a radically experimental proposal from one end to the other —this Michigan thing comes in the form of a

Constitutional Amendment which would imbed all of this speculative arithmetic in the Constitution itself, where it never can be changed without a vote of the people. It would be a statute with all the permanence of a Constitution.

Listen! In not one single State which has any form of a State Income Tax Law, is there any word in any State Constitution about the size or extent or other details of what the tax itself actually shall be. This is the case in all fourteen States. The only remote exception is in the case of Virginia, and here it is merely a Contsitutional provision that no tax shall be levied on incomes under $600. Every State leaves the details of income tax arithmetic to its Legislature, where it can be changed from time to time in conformity with experience and in relation to the State's fiscal needs. There never was an Income Tax Law, State or Federal, yet passed—no matter how earnestly the best economic experts in the land worked upon it—which did not prove bad in spots, and which did not need a variety of changes and improvements. There never was a tax law yet which did not have to change with time and experience. Yet Michigan is asked to ignore all these warnings of history and of common sense, and to write into the *Constitution* (where any changes, big or little, can come only by a vote of the people) the details of State Income Tax schedules which are not the work of economic experts and which violate every precedent and every rule of experience. We have no hesitation in calling such a thing a sheer monstrosity. Though pretending to encompass the details of what ought to be statutory action, the Amendment is wholly inadequate and impossible—even as a Statute—in its lack of essential details and discriminations. It is not a finished product. It is, in reality, neither Statute nor Constitutional Amendment. It is hybrid—a poor cross between both, inheriting the virtues of neither. It would invite a thousand interpretative lawsuits—plus tax chaos. Economics cannot be mastered in any such way. It is folly to attempt it.

Wisconsin was the original Income Tax State. It has had a longer experience with State Income taxation than any other Commonwealth. It knows more about State Income Taxation than any other Commonwealth. Yet this is all the Wisconsin Constitution says upon the subject:

> *"The rule of taxation shall be uniform and taxes shall be levied upon such property as the legislature shall prescribe. Taxes may also be imposed upon incomes, privileges and occupations, which taxes may be graduated and progressive and reasonable exemption may be provided."*

The first sentence was incorporated into the Wisconsin Constitution in 1848. The second clause was added in 1908. Compare that with the long, tortuous Amendment—attempting numerous details, but ignoring many other details equally vital if details are to be embraced at all—proposed in the name of the Grange! Secretary Myrland of the Wisconsin State Tax Commission says: "*Of course* we do not prescribe details in the Constitution, but reserve them for the Act itself." *Of Course* the Michigan proposal should not prescribe details—but it does. And the details themselves are an abortion. Wisconsin starts its tax at $800 and $1,200 incomes (with additional exemptions of $200 for other dependents.) Michigan proposes to start at $4,000—(in order to get more votes from the larger field exempted). Wisconsin rates graduate from 2% to 6% on corporate income, and from one per cent on the first $1,000 of personal income to six per cent on $12,000 and thereafter. Michigan proposes to start at 5% and finishes at 10. This Michigan proposal, in other words, out-Wisconsins even Wisconsin!

Some States have had the wisdom to substitute State Income Tax Laws for General property Tax Laws—notably, Massachusetts and North Carolina. That substitution is necessary, as we see the problem, in order to make the principle wholly safe against exploitation. In Arkansas the State Income Tax is for the sole use of the public schools. In Texas, State Controller Smith tells the Herald there is "a growing sentiment in favor of the substitution of income taxation for general property taxation." Various of the States have different refinements of detail—basing the State Income Tax relatively on the Federal Income Tax (whaever it may be from time to time) and requiring that the State shall be paid at the rate of one-third the tax paid to the Federal Government. But no State has any such monstrosity as that proposed for Michigan and the Herald is unable to concede a single sound reason why this pending Michigan Constitutional Amendment should not be voted down. It would be dangerous to the whole economic structure of the Commonwealth to inject this unprecedented and unsound exaction into the basic law of the State. But *it will be thus voted* unless all those who believe in sound taxation and sane Constitutionalism—including thousands of Grangers themselves—awaken to the imperative need to forestall this menace.

It may be discouraging to those who believe in a sound State Income Tax principle, as do we, to face another long delay until the *right* kind of a State Income Tax Amendment to the Michigan Constitution can be drawn. But there is no alternative. The Herald warned the

Grange that it was precipitating an impossible issue. We spoke in ample time. We cannot be accused of mere obstruction. Now Michigan *must* defeat this pending measure, and those who believe in the State Income Tax principle, soundly organized and administered, must then make a fresh start. The Grand Rapids Citizens League spoke out this week against the pending Amendment on the theory that Michigan should not place herself "in the same category with several other States which inflict a State Income Tax." While there is something to be said for the Citizens League's theory that the conflict between Federal and State Income taxation needs liquidation before there is further expansion in the latter direction, and while the Republican National Platform proposes tax conferences to serve this desirable end, our own objection to the pending Amendment is on a different basis. This pending Amendment would *not* put us in "the same category with other Income Tax States." It would "put us in a category" all by ourselves—unprecedentedly lonesome in an unparalleled adventure foreordained to disaster.

THIS IS THE PROPOSED AMENDMENT TO THE CONSTITUTION, WHICH WILL BE SUBMITTED TO THE VOTERS AT THE NOVEMBER ELECTION.

Section 3. The legislature shall provide by law a uniform rule of taxation, except on property paying specific taxes, and taxes shall be levied on such property as shall be prescribed by law. The legislature shall provide by law a scheme of taxes upon the net gains, profits and incomes of all citizens and inhabitants of this state, from whatever source said gains, profits and incomes are derived, which tax shall be graduated and progressive as follows:

There shall be an exemption of $4,000 per annum of all incomes.

Incomes of from $4,000 to $20,000 per annum shall be taxed at the rate of 5 per centum.

All incomes above $20,000 up to and including $40,000, shall be taxed at the rate of 6 per centum.

All incomes above $40,000 up to and including $60,000, shall be taxed at the rate of 7 per centum.

All incomes above $60,000 up to and including $80,000, shall be taxed at the rate of 8 per centum.

All incomes above $80,000 up to and including $100,000, shall be taxed at the rate of 9 per centum.

All incomes above $100,000 shall be taxed at the rate of 10 per centum.

The income tax law, herein authorized shall be administered by a board of state tax commissioners.

All monies paid to a board of state tax commissioners under the provisions of this amendment shall be paid into the state treasury and shall then be credited to the general fund of the state, and shall be used for defraying the general expenses of the state government and for the payment of principal and interest on state bonds.

On or before the first day of September of each year, the auditor general shall deduct from the total amount directed by the legislature to amount of money received under the provisions of this amendment and credited to the general fund of the state for the current year and the balance, if any shall be deemed, to constitute the state tax to be apportioned among the various counties of the state in accordance with the provisions of the general tax law.

OBSTETRICS

What is the matter with obstetrics? That is the query that is being put at frequent intervals and on varied occasions all over the country. Maternal morbidity and mortality has not been reduced in this country during the last twenty years. According to census reports 16,000 women die in labor annually. Puerperal septicemia and eclampsia cause at least half of the deaths. What is the matter? DeLee, in a report of 40,000 labors, cites no deaths from eclampsia. The symptoms of a complicating nephritis can be detected before the convulsion stage arrives. Why isn't it being detected?

Holmes, in 1845, pronounced puerperal infection a private pestilence. Today we are familiar with the causes of infection and their prevention, still why so many deaths from infection? No, the midwife is not the culpable party. Possibly the responsibility lies closer to home and in our attitude of placid resignation we are stumbling over it daily and give it no thought or recognition.

The rich and poor receive creditable obstetric care because of the hospitalization they are able to secure and because in the hospitals they are under the care of trained specialists in obstetrics. It is the middle class women, who cannot afford hospital care or trained specialists that pays the mortality penalty. She consults the general practitioner, the middle class medical man, and there is the basis of our trouble.

Let us face the situation squarely. It was Dr. J. Whitridge Williams who stated:

"Among ourselves, as specialists, individualism is possible and desirable. Individualism, however, will not solve the problem for the general practitioner. He must be satisfied with a generalization of the minimum standard of obstetric management.

"Certain procedures are now recognized as a part of the routine technic of good obstetrics, that a decade ago were certainly individual, especially those relating to diagnosis and asepsis. The general practitioner, who, as a medical student, failed to acquire the fundamentals of obstetrics, or if he acquired them, fails to apply them, accepts his morbidity and mortality as inevitable because he is callous to their significance.

"If every general practitioner, nay, if every man who undertakes the care of a maternity case, could be compelled to take a short postgraduate course every five years, induced to occasionally attend one of the clinics now being held annually in many of the large centers, and be urged meantime to read the standard medical journals, the result would be quickly appreciable upon the statistics of maternal morbidity and mortality. These have been so long stationary that they seem, as it were, to have become a permanent reproach to the doctors of this country."

That seems to summarize the opinion throughout the country. If that summarization is correct, then there is but one course, and that is for the medical man to perfect his technic. We realize his fees are small and the demand made upon his time by these cases is great. Many dislike and hate confinement cases, still they accept them to hold the families as patients. Struggle for practice and existence is difficult, but no justification exists for inferior medical obstetrical care or neglect, simply because you receive small fees or want to hold the family. There can be but one conclusion—if you accept an obstetrical case you must provide modern obstetrical care during the prenatal period and during labor. If you are unable to do this, are not equipped, are not versed in modern principles and practices, then there is no justification in accepting the case. If a mortality results you are directly responsible if it resulted from inadequate care. Do you want to accept that responsibility?

The solution is—men who will limit their work entirely to obstetrics and doctors who have consciences sufficient to dare to decline accepting obstetrical cases because they are not modern in the care they give.

We shall temporarily rest our argument at this point. We invite further opinions for publication. Will you not reflect and then write us your conclusions?

COUNCIL COMMITTEES

Chairman J. B. Jackson has appointed the following Standing Committees of the Council for the ensuing year:

Publication: Stone, Bruce, Darling.

Finance: LeFevre, Green, Baird.

County Societies: Corbus, Randall, Ricker.

The Executive Committee of the Council is composed of the Chairman and Secretary of the Council with the Chairman of the three Standing Committees. The Executive Committee plans holding monthly meetings during the coming year.

I WILL

Be so strong that nothing can disturb my peace of mind.

Make all my patients feel that they will recover.

Only think of my mistakes in the past, that I may do more for my patients in the future.

Give much time to the improvement of myself so that I will not have time to Criticize my Brother.

Remember the greatest thing in Life is doing for Others.

Learn from the Chinese: "Too large for worry, Too noble for anger, Too strong for fear, Too contented and happy to permit trouble."

—*The Morton Hospital, San Francisco.*

Editorial Comments

Summarized, the increase in our annual dues will make possible the following increased activities of your State Society:

1. County Society Post-Graduate Clinics.
2. Public Health Extension Education.
3. Education of the Public as to Scientific Medicine.
4. Committees with Budgets enabling them to better perform their work.
5. A full time Executive Secretary traveling about the State in our interests.
6. A larger, more valuable State Journal.
7. Clinic Weeks in Councilor Districts.
8. Expansion of the work of the Joint Committee on Public Health Education.
9. Moulding of sound public opinion regarding medical legislation.
10. Making possible more personal assistance to individual members.
11. Increased total membership and membership solidarity.
12. Annual Meetings with increased Clinical Features.

These must be admitted as desired and essential features of our Society's scope of usefulness and justification of existence. Under our present income it is impossible to accomplish a single one of these purposes. As an organization we must progress. To stagnate means but one end and that is disintegration. We believe that this proposed program will receive unanimous endorsement and that each member will welcome the inauguration of these announced activities by their State Society.

At stated intervals during the past ten or more years we have urged and urged our members to examine those who came for consultation or to whom you were called. Examine each patient, not superficially, but thoroughly. A few questions, a feel of the pulse, a look at the tongue, a stethoscopic examination of the heart or lungs without removal of the clothing is not an examination. We urge once more that you form the practice of thorough examination of your patients—why? A

recent survey in Philadelphia revealed that 86 per cent of private patients and 97 per cent of dispensary patients stated that they had become dissatisfied with former physicians because they had not been examined, or examined so superficially that they considered the examination valueless. Sixty per cent of these patients volunteered that they were perfectly willing to pay for services if they could feel that they were being carefully studied and efficiently treated. Of the number, 34 per cent had consulted irregulars and cults because of not having been given complete examinations. This desertion of the medical profession emphasizes once more the need of careful physical examinations. This is an age in which the public demands efficiency and when we fail to demonstate efficiency the public is going to seek it elsewhere. Once more, we urge thorough, systematic examination of every patient consulting you.

Your interest, your initiative and your activity added to that of your fellow member determines the value of your County Society. If you put nothing in, you cannot expect to withdraw anything. If your meetings are uninteresting it is because you fail to contribute to the interest fund. The mere payment of your dues will not create a valuable, active County Society. Numerical strength is but a minor feature. Numerical strength plus numerical effort and interest is the one essential factor. Your meetings are now being resumed after a summer's recess. Join with your fellows in outlining a plan of meetings and activity and then contribute a full measure of interest and participation. The result will be an active, live organization in your County that will gain in personal value and profit to you. Remember that it is a personal reflection upon you if you have a dormant County Society. If you do your part it will result in a live organization. What are you going to do about it?

A Conference of State Secretaries is scheduled for November 12 at the American Medical Association headquarters in Chicago. These annual conferences have done much to bring about a unity of purpose and activity on the part of State Medical Societies that is now producing a dividend for the individual doctor. It is illustrative of organizational accomplishment in contra-distinction to individual or disassociated effort. Credit for thus bringing about a unity of effort must be given to the officers and Board of Trustees of the A. M. A. It evidences the work of the A. M. A. and presents one more reason why you, doctor, should become a fellow of the A. M. A. If you have been indifferent or careless, we once more urge that now is the time to file your application for Fellowship. You profit by the achievements of the A. M. A. and in addition you will weekly receive the Journal of the A. M. A., which is a post-graduate and extension lecture course in itself. We urge with positive emphasis that you file your application this week.

As a member of your County and State Medical Society, you are supporting and participating in the organizational work in your own State. There are national problems that affect and concern you. They can only be solved and adjusted by national effort and activity. The national organization that is concerning itself with these problems is the American Medical Association. Because it does concern itself with national affairs that affect individual doctors this American Medical Association should receive the support of the individual doctor. This may be contributed by your becoming a Fellow of the American Medical Association. We earnestly recommend that you subscribe to Fellowship today. In addition to all the other benefits you will receive, each week, The Journal of the American Medical Association. The entire cost is but $5.00 per year. Join now. Subscribe your personal support by so doing. Send for an application blank by applying to Dr. Olin West, Secretary, American Medical Association, 535 N. Dearborn street, Chicago.

It seems that one encounters that "tired feeling" more frequently than in years past. Your business man, banker, clerk, society matron and broker seemingly go stale at frequent intervals and feel the need of a vacation several times a year in place of the accustomed yearly vacation. We are not willing to admit that physical resources are lower or that present day physical demands are greater. It is more reasonable to assume that with congested population and with streets as well as country roads marked with a continuous cloud of smoke from auto exhausts that we are breathing devitialized air heavy with carbon monoxide. We are being steeped in carbon monoxide air and inhaling small continuous amounts of that poison. It is this that saps our pep and lessens our activity. We must limit this nuisance by some means and in the meantime get out where autos do not contaminate our breathing air—or take frequent vacations.

We trust that every member acquitted himself of his citizenship responsibilities and registered in his voting precinct or district and is entitled to vote on the November Election day. When the time comes for you to cast your ballot may you have taken the trouble to have informed yourself fully on the issues that present. Your vote should be cast after deliberate reflection and on principles and not party lines. We are not urging or advocating the interests of any candidate or party. We simply urge that you be not mislead by distorted, incomplete or inaccurate propaganda or political harangue. Draw your individual conclusions from complete and relative information. Vote for those candidates whom you sincerely believe will be true to their constituent's interest. Lastly, vote and register your governmental preferences. To fail to vote is well nigh a traitorous act.

As we have frequently observed, there are some seventy different so-called and self styled doctors, holding forth as being competent to serve the public. They subscribe to as many different theories and principles. The public is unable to distinguish them from the regular Doctor of Medicine. It is but proper and right that an easy method of differentiation be established. There is no easier or effective method than to use the abreviation of your title, "M. D." in place of "Doctor." Remove the "Dr." from your letter heads, prescription blanks, windows, office doors and telephone directories and use "M. D." in its place. To do so is to set forth an effective means that will enable the public to distinguish you from the horde of alleged doctors.

Personal advertising in the form of paid advertisements, repeated personal items or professional activity is tabooed by the principles of ethics of the American Medical Association. What applies to the individual doctor likewise applies to the "group," clinic and hospital. Censorship is promptly brought

upon the individual when he violates this principle. The same censorship should be meted out with greater promptness and force when the offender is a clinic, group or hospital. Such combinations have no greater skill or ability to advertise than has the individual and a pretentious name, equipment or combination does not imply inherent exceptional ability or skill. County Societies should censor all such attempts.

Again we stress the need that you take the time to carefully read and reflect upon the minutes of our annual meeting that are contained in this issue. Don't simply scan these pages. Read fully the annual committee reports. Call these recommendations to the attention of your local Society. Volunteer to assist in instituting these features in your own country. Do your part to obtain the fullest benefits of membership. Don't shrug your shoulders or think that you are too busy. There is a vast amount of personal satisfaction in aiding to advance the ends sought by medical organizations. Join in with spirit and vim.

Join your County Society. Having joined, become more than a dues paying member. Become active in it's work—program, committees and clinical. You will receive in return just what you put in. If your County Society does not interest you it is because you fail to contribute to make its meetings and work interesting. Let this fall and winter witness an avowal on your part to become an active member. It is your fault if you have a dead County Society and it is to your personal dishonor and discredit if you do not participate in it's work.

Presidents and Secretaries are requested to advise their members regarding the annual increase of State dues. This increase is effective for the year 1925. If any questions arise, or if further information is desired, your correspondence will receive prompt attention. It would be appreciated by the Council if each County Society would officially approve and endorse the action of the House of Delegates and so advise the State Secretary.

Under our present income from dues it is impossible to pay actual expenses of our Annual Meeting, Committee work, printing, postage, etc. Added dues are imperative to meet needed expense. Increased dues are needed even though no new work is undertaken. The House of Delegates increased the dues because such action was imperative. We refer you for full particulars to the Editorial in this issue—"Why an Increase In Dues."

Of course, you are going to read the minutes of the Annual Meeting and then you are going to get busy and aid in putting these new plans into effect in your own County Society. One of the first things you are requested to do is to urge everyone of your fellow members to read The Journal. It is going to contain some mighty important announcements during the next three issues. Be on the alert.

At a meeting of the Board of Trustees of the American Medical Association, Atlantic City was determined upon as the place for the holding of the 1925 Annual Meeting. The dates are May 25-29.

President Clancy is giving careful consideration to the selection of appointees for Committees. Announcement as to selections made will be made in our November issue..

Correspondence

The Editor of the Journal of the Michigan State Medical Society:

In your last issue appeared an article on Mobilization Day to which I would like to take exception.

That you should espouse the party and policies of the Messrs. Newberry, Daugherty, Fall, Burns, Dr. Coolidge, et al. to a 100 per cent degree is your own private affair and has nothing to do with the policy of a professional journal. When you stoop to insult people, who do not agree with you, and call them bolsheviks, politicians of the Bryan-La Follette type and fanatical preachers you grossly overstep the bounds of decency and show a great lack of tact. Allow me to call to your attention the fact that I served in the U. S. Army for six years and six months, saw service in Cuba in '98 and during the so-called Filipino Insurection, was cited for meritorious service to the Secretary of War and was discharged with the character of excellent. I am neither proud nor sorry for my army experiences. During my stay in the army I saw enough wanton cruelty and uncalled for barbarism to turn me an uncompromising pacifist.

In regard to Mobilization Day, allow me to call your attention to a speech delivered by one Rear Admiral Rodgers at the recent Williamstown, Mass. Institute of Politics, in which he stated that it was our duty to be armed to the teeth in order to conquer "The World" as soon as the propitious moment should arise.

Again, if you should care to espouse the ideals of such preparedness and war-fans as Kaiser Wilhelm, Czar Nicholas, Hindenburg, Foch, Ludendorff, Admiral Fisher, General Bernhardi and our own General John Pershing, it is your own affair; to impose your ideas upon your readers is, to say the least, overstepping the duties as editor.

Should you continue to use the space of the paper for further political propaganda I should be compelled to ask you to discontinue sending me your valuable paper.

Very respectfully yours,

Hugo Muller, M. D., Detroit, Mich.

Comment: One Hundred per cent Americanism and 100 per cent preparedness is always and ever will be sponsored and advocated by the present Editor. Whenever individuals or groups of individuals seek to undermine and obstruct such Americanism and Preparedness we will lend these columns to assist in refuting and defeating their aims. We recognize that no party is composed of 100 per cent invulnerable members. All preachers are not holy; all lawyers are not guiltless; all doctors are not ethical. That does not condemn a profession or a party as a whole. There are undesirables in the democratic party as well as in the republican party, but that fact does not utterly condemn either party. We repeat—"We are for Coolidge and his plans for preparedness 100 per cent." We are opposed to all the "bolshevicks" of Bryan-La Follette type who condemn and obobstruct preparedness. We said nothing about Coolidge as a candidate for President.—Editor.

Editor of the Journal of the Michigan State Medical Society:

I am writing you to inform you of the wonderful treatment the physicians whom attended the Michigan State Medical Society meeting at Mount

Clemens received at the Colonial Hotel by the manager, Mr. W. W. Witt, and all his employes.

Every physician who stayed at the Colonial received the very best of attention, finest of meals, privalege o fmineral baths and best of rooms.

When we came to check out and ask for our bills we were informed "no charges whatever, compliments of the Colonial Hotel and its management."

This was such an unusual thing and hardly seemed possible but, never-the-less, it was true.

Don't yo uthink the Colonial Hotel and its manager, Mr. W. W. Witt, should receive mention and thanks through the Journal and a copy sent to Mr. Witt?

If you do, please give him a "write-up" in the next issue?

With kindest regards and a prosperous year to you, I am

Sincerely

J. H. Charters.

State News Notes

COLLECTIONS

Physicians' Bills and Hospital Accounts collected anywhere in Michigan. H. C. VanAken, Lawyer, 309 Post Building, Battle Creek, Michigan. Reference any Bank in Battle Creek.

NURSES' private home, invites convalescents and invalids; best of care, fine location. R. Rs. N. Y. C. and Interurban; best of references given. For particulars write Bessie Bileth, 566 Ely Street, Allegan, Mich.

Large Eye, Ear, Nose and Throat Clinic wants a man who wishes to take up refractions. Opportunity to learn Ear, Nose and Throat work in addition, if qualified.. Address Michigan State Medical Journal, Powers Theater Bldg., Grand Rapids Mich.

Dr. R. G. Owen in the Owen Clinical Laboratory.

Dr. C. C. Bailey has opened an office on Fenkell Road in Detroit.

Dr. Earnest Reinch is now associated with Dr. C. W. Husband in Detroit.

Dr. A. R. Ruskin has opened an office in Detroit at Mack and St. Jean Avenues.

Dr. Allen Kanavel, of Chicago, will address the Detroit Academy of Surgery on Oct. 9th.

Dr. V. L. Van Duzen is now located on Forest Avenue, East, near Lillibridge, in Detroit.

Dr. Eugene Smith, Jr., of Detroit, has recovered from a recent case of pneumonia, contracted at camp.

Dr. J. J. Corbett has been one of the many ardent Detroit Yacht Club yachtsmen during the past summer.

Dr. A. S. Dewitt, of Detroit, enjoyed a vacation touring through the upper peninsula and at Les Cheneux Islands.

Dr. W. J. Stapleton was installed as President of the Wayne County Medical Society at the meeting on September 15, 1924.

Dr. Robert B. Kennedy is now located at 948 David Whitney Building, Detroit. The doctor is limiting his work to Gynecology.

Dr. George J. Reberdy and his family have leased their Detroit home for the winter and expect to sail for Europe about the middle of October.

Dr. R. J. Hutchinson, of Grand Rapids, was compelled to undergo an emergency operation on Sept. 13th. On Sept. 26 he was taken to Butterworth for the second stage operation.

Prof. G. Forssell, Director of Radium Institute of Stockholm, Sweden, was the guest at the Battle Creek Sanitarium on Sept. 14th. A dinner was tendered to the Doctor to which a goodly number of medical men of western Michigan were invited.

Dr. H. W. Hewitt has been appointed Chairman of the Program Committee for the Detroit Academy of Surgery. The meetings of the Academy of Surgery are held monthly, on the second Friday of each month. It has been decided to have an out-of-town speaker the first month, and every other month after that, with local speakers for the meetings in between.

Joint Committee on Public Health Administration will hold its regular meeting at the Michigan Union, Ann Arbor, on Oct. 6th at 12 m., eastern time.

Dr. Bruce Whyte is associated with Dr. J. S. Pritchard in the Chest Department of the Battle Creek Sanitarium. Dr. Whyte was formely connected with the Sanitarium at Saranac Lake.

The following announce the removal of their offices on October 1st, 1924, to the Grand Rapids Clinic Building, where they will continue their practices as before and conduct a general diagnostic clinic to be known as the Grand Rapids Clinic:

Dr. Alexander M. Campbell, Dr. Fred P. Currier, Dr. Thomas D. Gordon, Dr. John T. Hodgen, Dr. John H. McRae, Dr. William Northrup, Dr. Ferris Smith, Dr. Richard R. Smith, Dr. Henry J. Vanden Berg, Dr. Merrill Wells, Dr. Joseph B. Whinery.

Deaths

Dr. Charles Truman Spencer, of Webberville, Mich., died September 9th, 1924. Dr. Spencer was graduated from the Detroit College of Medicine in 1913 and was 37 years of age. He is survived by his widow and two children.

Dr. W. W. Walton of Mancelona, Michigan, died Sept. 11th as result of an operation for appendicitis. Dr. Walton was 36 years of age, and a graduate of the University of Michigan in the class of 1914. He is survived by his wife and little daughter.

The death of Dr. H. M. Holcomb of Lansing, Mich., which occurred last March, was not reported at that time. At the time of his death Dr. Holcomb was City Physician of Lansing, having occupied the position since 1921. He was 36 years of age.

County Society News

CALHOUN COUNTY

The sixth regular meeting of the Calhoun County Medical Society was called to order by Vice-President Kingsley, at Dr. Sleight's cottage, Goguac Lake, Tuesday evening, June 3rd, at 7:15 p. m.

It was moved by Dr. Stone and seconded, that the minutes of the last meeting be approved as printed in the Bulletin.

The following bills, all of which had been approved by the members of the Board of Directors present, were read: Phoenix Printing Co., printing Bulletin and cards, $23.50; Levant Cole, flowers, Dr. Gillette, $5,00; Dr. Squier, postage, $2.28. Dr. Stone moved that the bills be paid. Seconded and carried.

The speaker of the evening, Dr. Dean Loree, was introduced by Dr. Hafford. Dr. Loree talked informally about the methods used in conducting St. Joseph Sanitorium. He felt that the future advance of medicine would be along hospital lines rather than group medicine. He called attention to the fact that only 5 per cent of the groups started actually survived. A number of histories were shown to demonstrate the methods of handling case records. At the conclusion of the talk, Dr. Loree was asked a number of questions concerning hospital management.

Dr. Stone moved that the Society extended to Dr. Loree and to Doctors Sleight and Haughey a vote of appreciation for the very enjoyable evening. Seconded and unanimously carried.

It was moved, seconded and carried that the meeting adjourn.

Attendance at the meeting and dinner, 34.

T. L. Squeir, Secretary.

INGHAM COUNTY

The Ingham County Medical Society held its annual picnic and steak roast at Potter Park on Thursday afternoon, September 18th, at 4:00 p. m.

Dr. A. M. Campbell was chairman of the general committee, and Mrs. H. B. Weinburgh was chairman of the ladies committee. Both committees worked hard to provide many good things to eat and many features of entertainment.

Max Wershow, Secretary.

Book Reviews

CHEMICAL DYNAMICS OF LIFE PHAENOMENA, by Otto Meyerhof. J. B. Lippincott Co., publishers.

The five lectures n this volume cover:

1. Physicochemical Mechanism of Cell Respiration.
2. Autoxidations in the Cell.
3. Chemical Relations Between Respiration and Fermentation.
4. The Transformation of Energy in Muscle.
5. The Energetics of Cell Processes.

Most of them were delivered in the summer of 1922 before the research workers of the physioligical laboratories in Cambridge, England, and in a more complete form in the spring of 1923, at the Rockefeller Institute in New York.

They are not intended as an exhaustive treatment of the subject. They contain part of the results which have been brought to light on the metabolism and the energetics of cells under German and English investigators, but it is thought that they will be very welcome to American physiologists and biologists. Included are not only the author's own studies, but part of the work of Otto Warburg on cellular physiology. The dynamics of muscle are treated in close connection with the results of the Cambridge School, particularly those of A. V. Hill. To avoid repetition, some parts of the original lectures have been omitted, while additions have been made concerning more details and the most recent results in this field of work.

MEDICAL GYNECOLOGY (4th Edition)—By S. Wyllis Bandler, M. D., Professor of Gynecology, New York Post-Graduate Medical School and Hospital. Octavo of 903 pages. Cloth, $8.00 net. W. B. Saunders Company, Philadelphia and London.

A text that has much to commend it when the author adheres closely to his subject of medical gynecology. On the other hand the chapters on endocrine theory and treatment is superfluous. The subject cannot be discussed in one chapter. Principles and method of treatment cannot be covered in the same chapter and be of value sufficient to guide the student or physician. There are comprehensive texts on the subject that will be of greater value and assistance. We are almost inclined to say the same thing in regard to syphilis and gonorrhea. The tendencies of authors seems to be to cover every subject in anyway related to the text of their book. The result is an increased number of pages and increased cost of the book. It would be better to leave out such discussions and simply refer the reader to a reliable text on these subjects. We repeat however, that the author's medical gynecological discussions are meritorious.

PRINCIPLES AND PRACTICES OF OBSTETRICS—by Joseph B. DeLee, A. M., M. D. Fourth edition, octavo of 1123 pages, 923 illustrations. Cloth, $12 net. W. B. Saunders Co., Philadelphia and London.

A fourth edition of this standard text is now available after a thorough revision. It is characterized by consistent conservatism and studied effort to discourage a seeming tendency toward early and often not indicated resort to obstetric surgery.

It is a text for the student, the beginner, but it is also a text for the practitioner. Especially do we lay emphasis on the fact that every practitioner accepting obstetrical cases should secure this text, study it, be guided by it and thus reduce morbidity and mortality. We urge a greater knowledge of obstetrical physiology and normal deliveries as the greatest factor in reducing our present unwarranted end results.

PATHOLOGICAL TECHNIQUE: A Practical Manual for Workers in Pathological Histology and Bacteriology: F. B. Mallory, M. D., and J. H. Wright, M. D. Eighth edition. W. B. Saunders Co., Philadelphia.

This manual, written by the authors who are respectively pathologists to the Boston City Hospital and the Massachusetts General Hospital, is an excellent guide that will aid and standardize the work of our laboratory workers. It will materially assist in improving the findings in our hospitals and go far in stimulating the study of pathological conditions found in hospital patients. It should be secured for every laboratory and hospital, superintendents may well pattern their laboratory work to conform to the principles and teachings of this manual.

MANUAL OF DISEASES OF THE EYE: C. H. May, M. D., New York. 11th edition. Wm. Wood & Co., New York. Price $4.00.

A splendid manual on the subject for students and internes. It covers the essentials and guides one in preventing the committing of needless errors in diagnosis and treatment.

The Journal
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Original Articles

THE MANAGEMENT OF SURGICAL CASES WITH SPECIAL REFERENCE TO THE IMPORTANCE OF A FOLLOW-UP PLAN

HENRY J. VANDEN BERG, M. D., F. A. C. S.,
GRAND RAPIDS, MICHIGAN

I believe it is the rule that the post-operative management of a patient ceases with his dismissal from the hospital. Instead it should extend over a period of a year and in some cases even two or three years.

The first consultation should mark the beginning of the management because at this time the general survey of the case is made. The survey should include besides the main diagnosis (say cholecystitis) all additional diagnoses which obviously will include the widest range of bodily and mental ailments. I believe the surgeon should then hold himself responsible for the management of all ailments found, unless a patient comes referred for a specific surgical lesion by one who will assume the management of other conditions, if present.

A woman of robust build, aged 41, came because of a large cystocele and rectocele that had bothered her for several years. It was found that she had diabetes, a bad mouth infection, a probable cholecystitis, (cholelithiasis), a thyroid adenoma and obesity. She was referred to an internist for straightening out of the diabetes, to a dentist for cleaning up of mouth infection. The cystocele and rectocele were then repaired. While convalescing in the hospital she had a severe attack of gall stone colic. Three months later the gall bladder, containing many stones, was removed. The thyroid adenoma is being watched. She was advised for the obesity and the diabetic condition is being checked up from time to time. When first seen a year and a half ago she was a physical wreck. She now is in good health. Her mental state always was good, therefore, the advice and management was limited to conditions purely physical.

ANOTHER PATIENT

A woman, aged 50, of medium build, operated four months ago for a thyroid adenoma, reported at the office in accordance with our follow up plan a month later than requested. She complained of local symptoms and was considerably upset for fear that she had a return of her trouble. There was, however, no enlargement or induration. All that was necessary to relieve her mind was to assure her that everything locally was perfectly satisfactory and that the result in every way was good. She had been overdoing; the common stumbling block. She was then advised regarding work, rest, and recreation, and was instructed to return in a month. At this time everything will again be checked up and she will again be advised and asked to report in six months or sooner if necessary.

This patient is not as robust as the other, and, therefore, requires more careful management. She is ambitious and is inclined to go beyond her limitations, but having no outside conflicts, she is not neurotic and will be easily managed. At the end of a year she will understand herself better than she ever has and in consequence will manage herself better than ever before. She will avoid fatigue.

ANOTHER CASE

A frail neurotic woman, aged 37, with four children, in good circumstances, but with many domestic and social conflicts, gave a rather indefinite history of appendicitis. Her case was carefully studied by different men over a period of months. It was decided that an exploratory laparotomy should be performed to give her the benefit of the doubt. At the time the patient was finally advised to have the operation, the relative values of the indefinite abdominal condition, as against the very definite neurosis and psychosis were discussed with the patient and her husband. At operation definite pathology was found. This was the first winning stroke. Having been prepared for the mental side of her trouble, which constituted at least 75 per cent of the total, she was gradually educated out of her bad mental habits so that at the end of a year results had been obtained of which we were proud.

This patient, as mentioned above, was frail and neurotic. What does that mean? By *frailty* I mean small build—in other words, small light bones. The parallelism of small bones and higher nervous sensibility in an individual is surprisingly constant. I have studied the relationship for a number of years and have become convinced of its true value in sizing up patients. The size of the bones is easily and quickly determined by examination of the forearm and hand. Patients with small bones—in other words, of fine texture, are generally quick and active, physically and mentally, and are inclined to be temperamental

*Chairman's Address, read before the Section of Surgery at Mount Clemens, Mich., Sept., 1924.

They have less endurance, and fatigue more easily than those of the more robust type. By *neurosis,* briefly stated, I mean living in disharmony with one's surroundings. The problem then involves two things—changing the environment, if possible, and adjusting the indiviual to the environment—usually more easily said than done. In some cases it cannot be done, but in most instances, by persistent advice and direction, these miserable floundering individuals can be made most valuable and delightful members of society.

An unmarried woman of 21, frail and high strung, who had not adjusted herself to her environment, came a year ago because of pain in the lower end of the spine. Five years ago, for the same complaint, the coccyx had been removed. Two years ago the same surgeon removed the appendix and a small ovarian cyst. Besides the pain in the lower end of the spine she complained of exhaustion, nervousness, headache, aching in the back of the neck, insomnia, poor appetite, constipation, and painful defecation. Practically the same syndrome of symptoms was present at the time of the first operation. She said, "I have lost confidence in myself and in doctors."

The analysis of the management of this case was simple enough. The patient's personality had not been recognized. The symptoms she presented were interpreted literally—in other words, the old practice of treating symptoms. Treating or operating local manifestations of a neurosis only emphasizes or fixes them more firmly in the mind of the patient. The management of this case should have commenced at the time of the first consultation with good advice. She should never have been operated. Upon painstaking analysis of all the factors contributing to her neurosis and thereupon advice along common sense lines, she has improved remarkably. She now understands herself.

I have observed that many practitioners, who are excellent in working out organic disorders, fail almost completely in recognizing and evaluating the personality of a patient. Such practice can never give near enough 100 per cent results. Why do so many fail in this regard? Probably not enough emphasis is given to it in our medical schools.

Any number of additional cases might be presented to bring out the importance of management of surgical cases, but the ones cited are sufficient to illustrate the message I wish to convey.

In conclusion, the average patient is not capable of managing himself to good advantage after he leaves the hospital, however well he may be instructed upon his dismissal. The natural consequence of being thrown, as it were, suddenly into his old environment, confronted with his old problems, domestic, social, financial, etc., is to resume his old habits probably accentuated because he now fatigues more easily as a result of the operation. During his residence in the hospital he is too interested in his immediate recovery to realize the importance of his future behavior. The management in a broad way is taken up to very much better advantage two or three months later. In our work, the average case reports three times during the year—three, six and twelve months respectively, and oftener in some cases. Some cases are watched for two or three years—as for example, certain cancers and extremely neurotic patients. Nearly every surgical case requires some management. The strictly organic ones, and they are few, are by far the easiest to direct.

A METHOD FOR THE PREVENTION OF COMMUNICABLE DISEASES AMONG SCHOOL CHILDREN*

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About the middle of September, 1923, our mayor asked me if I would accept the office of health officer, our health officer having resigned. The mayor gave me the information that he had asked several of the physicians to accept the appointment, none of whom would do so. He then said he was going to draft me and made the appointment. Among the thoughts I had at this time, were:

Whom will I meet?
What is there to do?
What can be done?
How best to do it?
Where are some examples of good Health Officers?
Where can I get help?
Does it take money? etc.

Among those I expected to meet were: Supervisors, dentists, doctors, school nurse, Red Cross, state board, undertakers, school teachers, members of the board of health, mayor and the commissioners, sanitary officer, policemen, school board, children, parents, etc. From them all I hoped to get help.

Among the things I thought should be done by a health officer as far as prevention of diseases is concerned, were the control and possible elimination of communicable diseases and educating the public to assist. Certain things came to mind, such as: At various times each year, educating for prevention of small-pox, typhoid fever and diphtheria by known and tried methods and trying to give each method a good name. Then teach the public in some way to recognize early symptoms of communicable diseases and by care not expose themselves to them, nor allow others to be exposed. For many years I had thought there was no limit to what could be done if everyone united

*M. S. M. S. Annual Meeting, Section on Public Health, Sept., 1924, Mount Clemens, Mich.

to wipe out these diseases in Owosso and elsewhere, they never to return until someone from outside brought them in again, or until someone of us went to other places and carelessly and unnecessarily exposed ourselves and again brought them into the city. Although I did not care to put up red cards myself, I thought that my chance for personal interview when I got so I could tell the public what I wanted them to do to help.

At various times I wondered where to get help and money if needed. Our city health fund totaled $1,855 for the year, with a little over $400 left to run from September, 1923, to June, 1924. This averaged for the year, about .124c for each individual in the city. Our board of health was made up of the mayor, two other laymen, one lady and myself. Under me was a part-time sanitary inspector, Mr. Robert Linton, who had made an enviable reputation in a period of two years by getting the milk supply of Owosso in good condition. I believe he came from Otsego, where I hear one of the efficient health officers of Michigan lives. The following items made up the $1,855 health fund:

Salary, Health Officer	$ 600.00
Salary, Sanitary Inspector	300.00
Salary, 3 members Board of Health	150.00
New Equipment	300.00
Keeper of the dump	240,00
Garbage Cans	100.00
Miscellaneous	$ 150.00
Telephone	15.00
Total	$1,855.00

The mayor said. "The job is yours, you may work out any good health program you like." The other commissioners were also congenial to a good health program. The mayor has several times said, "Go where and when you like to better fit yourself."

As smallpox and diphtheria were very prevalent, their suppression seemed my most important work. Reports of each were coming fast and the fight alone against them began. Vaccination being the only prevention for smallpox, my main object was to give vaccination a good name and have everyone vaccinated. I followed every possible exposure by driving hundreds and hundreds of miles and vaccinated. I vaccinated in school and out, without much publicity. In school, at first, I made the mistake of vaccinating a whole room where there was one exposure, but soon vaccinated all in the building. Because one school was more than hard to control on account of smallpox and diphtheria, it was closed for weeks.

When someone told me Uncle George had lost an arm after vaccination, I kept on vaccinating. When someone told me Aunt Mary had died after vaccination, I kept on vaccinating. When someone told me James or Susie had never been well after vaccination, I kept on vaccinating. When someone said, "I would rather have smallpox than be vaccinated" I said, "The time will come when you will change your mind," and it did and I kept on vaccinating. I continually said, "Give me enough smallpox and Owosso will have no more for years; all this because I had never seen any harm follow a good, clean vaccination with proper after care. I told the hundreds that I myself vaccinated, of the slight cost and the great good to be accomplished by being vaccinated. I told all that as far as smallpox was concerned, doctors were putting themselves out of business when they vaccinated, and that doctors were not getting rich vaccinating, as was often said. I told them that the medical profession was the only one on earth that was continually trying to put itself out of business.

By those methods I tried to give vaccination a good name. I frequently called attention to the mild after-effect among young children. Still further, I cared, free of charge, for each arm or leg that I vaccinated, dressing and cleansing them frequently.

Since April 18, I have seen hundreds, yes, thousands seek vaccination to protect themselves against a severe type of smallpox which prevailed in Michigan and Canada. I have never tried to appeal to the public through fear. About February, 1924, after I had twice had smallpox down to one case, for fear I was not going to succeed alone by gradually but surely cleaning up, I secured from the secretary of the chamber of commerce a list of 24 of the large employers of labor in Owosso. My plan was to call on each for assistance in the complete vaccination of Owosso and also to appeal to the business houses for aid by posters, etc., in putting on a 100 per cent vaccination campaign. This, however, did not seem the opportune time, as smallpox was surely on the run. Cases were few and April 18 saw the last one. Early in June I could see that more help was coming. People were returning from Detroit for vaccination . There was more or less fear of the situation.

After a conference with the mayor, I decided to take a week's vacation. Upon my return a general vaccination was to be advised. The great desire to be vaccinated came over many while I was away. I estimate that between two and three thousand were vaccinated, so that on return, my appeal did not seem necessary. By April 18, I estimated that two-thirds of the whole population had had a successful vaccination or had had smallpox, including five-sixths of the school children. The June epidemic of vaccination made our population very much nearer the 100 per cent class. During a period of a little over two years Owosso had no less than 355 cases of smallpox. From that and diphtheria for the last quarter of 1924, there was an estimated economic loss of $200,000!;

enough to run the city business for a year. I tried to thoroughly impress this upon the public of Owosso. As I said, we now have much nearer a 100 per cent vaccination, and sentiment has completely changed in regard to it.

A few weeks after my appointment, an enthusiastic young preacher was getting up his program for the month of November. He asked the mayor, superintendent of schools and myself to take charge of a Sunday evening service, with our different specialties—city government, city schools and city health. Mine came last and I accepted. I had never made but one public speech in my life and this could not be heard ten feet from the platform. Luckily for me, the first and second speakers read their speeches and were quoted in the paper, so I had a good reason to read mine. I believe the church could crowd in 300 or 400 people. The speeches were advertised and the mayor and superintendent drew crowded houses and I, about a two-thirds audience, but it was a splendid one and appreciative. However, no reporter was present so I spoke without recognition. This little church gave me my start on speaking as health officer. If I recall correctly, the chamber of commerce speaker for the following Tuesday could not be present and I was asked to take his place, so gave my Sunday speech again and our local paper asked for the whole paper.

Since that date the Owosso Argus-Press has been one of the greatest possible helps any health officer could have. The state board of health gave its health officers' meeting in Lansing last December. I attended a few of the sessions, and now wish I had attended all. The greatest single thing I gained from this meeting was the remark made by someone as follows: "A health officer that cannot do things without money, cannot do them with money." This remark gave me a thought. I need help; I have no money; where can I get it without pay. Our superintendent of schools had repeatedly said in public that Owosso was in bad condition, according to the authorities at Lansing, so I knew I would not meet opposition from that source.

My plan was to visit the different school buildings, teach the teachers to recognize early symptoms of communicable diseases and send children home that appeared sick, had a cold or sore throat, and to ask each teacher to act as an assistant health officer and keep me posted as to the location of various diseases. No child who had been sick with a communicable disease was to return to school without my permission. The fact that 96 school teachers had joined the health department was made known to the public. These teachers did their work exceptionally well and so far during my work there has been very little opposition from any source. The public took to this plan very nicely. During the months of October and November I gave about nine-tenths of my time to health work. Besides trying to enthuse all patients that came to my office with the good health idea, I made nearly 400 speeches outside my office as follows:

3 to the County Board of Supervisors.
11 to the School Teachers.
2 at Churches.
1 at the Metropolitan Club.
2 at the Chamber of Commerce.
1 at the Holiness Seminary.
340 where I have put up cards and many in the school rooms.

Those made where I placarded a house, lasted from 10 minutes to an hour, or longer, and were educational in character as to all common diseases, regardless of the card put upon the house. A request was made to tell their neighbors my story. In my house and office speeches I dwelt largely along the line of what a cold or sore throat may mean. Mother gets the job—children the after effects and death gets you altogether too early from organic diseases resulting from these infections. At least half a million or more die every year and sorrow, suffering and expense come with this.

These speeches at the homes, I believe, have been a great help in getting public co-operation, because you know it is one thing to read a speech in the paper or read a slip on some disease handed to you at the door, and another thing to talk with a speaker, however poor a one he may be, if you realize he means business. When I met the teachers at their buildings, both public and parochial, each meeting proved very interesting to me because of the great interest displayed and the large number of questions asked. They lasted from 30 minutes to one and three-quarters hours, after the afternoon sessions.

Diphtheria in Owosso last fall was widespread. I had cases 55 years of age, so it was not entirely a school epidemic. As this was a clean-up job, I have had little time so far to talk toxin-antitoxin. When I quarantined for diphtheria, my main talk was to get antitoxin early, in sufficient quantities, as it was free. I have never seen any harm from it—give it to all members of the family and anyone else exposed. I told them of the large number of deaths without it, and also how it was made, to convince them that when given, the possible harm was slight. I told them that nearly 80 per cent died without it and that in the last 50 years 45,000 had died in Michigan of diphtheria.

When I was told of someone dying after antitoxin, I told them it was the poison of diphtheria that caused paralysis and killed, and that antitoxin was like pouring water on fire as far as diphtheria was concerned. I told them many times that if I had a case of diphtheria the first day and gave a large dose of

antitoxin, I had sufficient confidence in antitoxin that I could say, "Goodby," they did not need me anymore. After antitoxin was given to the whole family they were instructed to remain away from the sick for at least three weeks, then diphtheria would probably not appear in another member of the family. In several hundred injections for protection, five cases followed 1,000 units for prevention. I have repeatedly said, "Antitoxin first, diagnosis afterward," in a sore throat. I early called the attention of the public and doctors to the fact that about one-third of our cases were in the larynx and were called "just a cold," and this, when laryngeal diphtheria is the most fatal type.

In our few scarlet fever cases I advised the quick and complete separation of the sick from the well in each family and did not have a second case in any family. If in doubt of the diagnosis, I advised antitoxin in questionable scarlet fever, or streptococcic sore throat. At this time I found the teachers were a great help, but why not get the children themselves working. In each room I placed a card, which I will pass to you, and asked the teacher to read it every Monday morning and at the first reading to ask all children to join the health department. The card is as follows:

PLEASE

Do not visit your neighbors when they are suspiciously sick.
Do not let your neighbors visit you when you are suspiciously sick.
Do not come to school when you are suspiciously sick.

JOIN THE HEALTH DEPARTMENT.

It is not necessary to have measles, whooping cough, typhoid fever, mumps, scarlet fever, small-pox, chickken-pox, diphtheria, infantile paralysis, nor sore throats.

EVEN COLDS ARE CATCHING

About 4,000 children joined the health department in a day. This I thought would get the children to help themselves and teach them before they were grown up so that they would never say, "Oh, I thought we had to have all those diseases." Yes, they are called children's diseases, and in the past may have seemed as necessary as teeth, eyes, ears, etc., but not now. This card in school brought results beyond my hopes. The children committed it to memory and took the word home to their parents. They would tell it to me on the street, and how they had joined the health department. The way the teachers interpreted the card to the children was most interesting. This was the beginning of mothers reporting directly to the health department, diseases in their homes. This, as you are aware, is required by law.

When time allowed I began to isolate and placard measles, which had not been done for some time. I went into the school rooms that were producing them and sent the children home. The teachers were a great help here. I placarded the fourth family in the first lot of cases last fall. These were brought from a nearby city, and were easily limited to 15 families. The next measles epidemic was also brought from a nearby city. It was not reported by a doctor and not known to me until six families were sick. This started spring vacation, school opened, and the teachers were on the job. One room produced practically all the cases. With plenty of help, and known early, I believe most of the cases could have been prevented. Following up exposures will stop measles as well as smallpox. I began now to talk the uselessness of measles, whooping cough, mumps and chicken-pox. I told the people what dangerous diseases they were, with their complications, and that as usual, mother gets the job, as probably the doctor is not called in one out of ten cases, the families must report them themselves. Further, that they should not consider the measles—"Oh, just the measles," but a dangerous communicable disease, and that 258 died of them in Michigan last year. I told them of the frequency of pneumonia in measles, and tuberculosis as a future possibility.

The third epidemic was also brought in from another city the last month and one-half of school. Wherever I went I repeated the story of the first family, eight cases at the same time for the mother to care for, due to careless exposure, at a loss of $200 in the family. The second family, a widow and two children, three weeks' wages lost; each time emphasizing the fact that mother gets the job in all communicable diseases. If she doesn't like it, think of her neighbors. I told my people that they must learn early symptoms and that a child in school with a cold may have measles, whooping cough, flu or smallpox, and that a child with a cold, kept in bed a few days, would probably not have pneumonia. That children with sore throats might mean scarlet fever, tonsilitis, flu, diphtheria, streptococcic sore throat, and that children with colds and sore throats should be kept home, as they could not learn in school. I told them that the teacher would probably pass them just the same if they did good work on return. So it was altogether better to keep colds and sore throats at home and hence leave the rest in school and increase the general attendance.

We have had one family with whooping cough in 12 months, a few cases of mumps, a few of chicken-pox and, to my knowledge, no infantile paralysis.

A goitre survey on the school children

helped to arouse interest in this respect. Getting the Boy Scouts to inspect our public downtown alleys twice a week during the summer gave them a duty in public affairs, and renewed an old habit of cleanliness, so that now we are proud of our alleys.

Our fly campaign was another source of education. We taught how some diseases are spread by flies, a large percentage of which live and breed in garbage and manure piles, and emphasized the necessity of cleanliness in this respect, and requested that our alleys be not turned into garbage cans in the future. I tried to spread the gospel that cleanliness, like the measles, is catching. I scolded very little and praised where it was deserving, and aswked every one to call us and let us help them. Let the health department help them as they call the fire department in case of fire, the police department in trouble. I tried to teach my people the health department was a department ready and willing to help, not hurt anyone. Schools, regardless of religion, were mine to look after as health officer, so I visited all. I tried to teach all how communicable diseases can easily upset a whole school system and give each individual teacher an endless job trying to bring up to date, children absent on account of sickness, when they return to school. I have never kept information from our newspaper and this policy has been a great help.

I do not believe people want to be sick. I believe, if educated to early symptoms, their great money loss, complications, after effects, early deaths, sorrow, etc., the public would help more. I believe the teachers and children can be a great factor in spreading the news that these diseases are not necessary now, nor in the future. Such remarks as:

"I would rather have Small-pox than be vaccinated."
"Just a cold."
"Oh! just the measles."
"Only the mumps."
"A little sore throat."
"Antitoxin paralized my child," etc.'

are not to be taken lightly and require a lot of education. I taught my people that many diseases, as plague, leprosy, yellow fever, etc., are almost out of existence. I taught my people how tuberculosis had been greatly decreased in the last 50 years. I told them I would like to live to see the day when all communicable diseases were done away with and that there was no better place to start than in Owosso and Shiawassee county. I did not fail to tell them our efforts had helped to reduce absence from school about 45 per cent from the year before, and that we could have done much better if mothers had not thought the measles "just a cold," and kept children at home. I did not fail to tell them how the county's contagious disease bills were being reduced and how the death rate was going down and how sentiment in Owosso had changed so that instead of someone calling me and saying, "Don't tell who I am, Doctor, but I believe the Jonses have smallpox; better look them up," it was, "We believe we have the measles, come and put your card up, so we will help to not spread them," and so better than 75 per cent of cards put up the last three months of the last school year were requested.

I told how Shiawassee county spent nearly $1,000,000 last year for its upkeep. So far as I know, the only money spent for prevention of communicable diseases was for tuberculin testing of cattle. I have frequently told this story:

"When I was a boy, I moved to Owosso from Fenton, where there were no factories, nor was it a railroad center. Accidents were scarce. In Owosso it seemed everyone had been injured. Now conditions have changed. By automatic air brakes on trains, outside car couplers, safety first in railroad shops, guarding saws, pulleys, planers, shapers, etc., in shops, easily 90 per cent of the accidents I had when I started to practice medicine 24 years ago, have ceased to occur, but we still exist "with the measles." Is it too much to say, or are we too hopeful if we dare to think that if men, women and children would throw their lives into this work, even as much as we in Owosso have done, that 60 days would free the United States from many communicable diseases?

THOUGHTS ON THE MODERN METHODS OF DIAGNOSIS AND TREATMENT IN DIGESTIVE DISEASES*

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In this article I shall sketch very briefly the trend of work in digestive disorders in the past few years, try to tell you how some of the newer methods seem to have stood the test of their few years of trial, and strive to present what seems to me the sane attitude to hold towards them.

The subjects I shall briefly touch upon will be:

"'The Significance of Gastric Secretory Findings."

"The Study of the Pancreatic Ferments."

"The Value of Non-Surgical Biliary Drainage in Diagnosis and Treatment."

*Annual Meeting, Mount Clemens, Sept., 1924, Chairman's Address, Section on General Medicine.

"The Value of Liver Function Tests."
"The Role of Faulty Food in the Etiology of Digestive Diseases."
"Focal Infection of the Digestive Tract."
"The Value of Roentgen Ray Diagnosis."
"The Rational Attitude Toward Surgery."

THE SIGNIFICANCE OF GASTRIC SECRETORY FINDINGS

Ever since the epoch-making work of Pawlow, there have been repeated attempts to found a gastric pathology based on secretory findings. First the ordinary method of stomach analysis was used, extracting the test meal at approximately one hour, then in the late 80's, Hayem, Matthieu and others constructed curves of gastric secretion based on the findings of test meals with the ordinary tube at repeated intervals. This method was abandoned until recent years, when there has been a sincere attempt to revive it by using a small tube in the stomach throughout the digestive cycle, aspirating small quantities at frequent intervals and constructing a curve of the gastric secretion. The trend of thought during the past year or two seems to be that this method also does not give results of sufficient value to warrant its use except on rare occasions.

My own experience with the method based on rather extensive routine use, makes me concur in the above opinion. There are too many variable factors at work to make a gastric secretory curve of any diagnostic value. We feel strongly that all we can hope to get from gastric secretory findings, in a rough way, is whether gastric juice is approximately normal, too high, below normal or absent; or going further is there or is there not free hydrochloric acid in the stomach contents, All this can be obtained quite as well by the ordinary test meal as by fractional methods. The passion for curves unquestionably deludes many into the belief that because a method is associated with these, it is necessarily more scientific.

The feeling against putting much reliance on secretory findings is well shown by the fact that in many clinics gastric contents are no longer studied, and entire reliance is placed upon clininal histoory, the general physical examination and the X-ray studies.

This, we believe, is going too far, because a knowledge of the secretory picture is of some value not only in digestive diseases, but in many other disorders as well.

The degree of acidity at or above normal is of little value in diagnosis. It has been shown that any degree of high acidity found in the abnormal may also be found in normal persons. The normal acidity of undiluted gastric juice has been shown to be .4 or.5 per cent instead of .2 per cent as previously taught and that departures from this are downward, rather than upward. Hyperacidity symptoms are fundamentally due to a rate of pyloric discharge which is not keeping pace with the acid secretion.

We feel strongly that an ordinary test meal should not be discarded because we are sure it often gives us facts of real value. To make our point clear, let us sketch certain of the conditions in which hydrochloric is frequently or constantly absent from the gastric secretion, so-called achlorhydria or achylia gastrica. It may represent the late stages of a true gastritis. It is frequent in gout and various of the chronic arthritides and has led to the use of hydrochloric acid therapy in place of the alkaline therapy. It may be found in many infections such as tuberculosis, chronic infections of the nose and throat, accessory sinuses and with pyorrhea and deficient teeth, or often in the acute infection, and here is probably a temporary toxic inhibition of function. It is met in pernicious anaemia and is not justifiable.

It is found in pellagra and sprue and hydrochloric acid therapy is said to be helpful in these conditions. It is present in 50-80 per cent of gastric cancer, especially early in those cases without previous ulcer history, suggesting that the achylia represents a specific toxaemia and is not due to extension of the disease or to an associated gastritis. It is found in many cases of high grade ptosis and malnutrition, and is especially frequent in chronic gall bladder disease. It may represent the gastric expression of a pure psychoneurosis. It is met with in conditions producing chronic passive congestion such as myocardial disease, and chronic nephritis. In the latter condition there is probably a toxic element as well.

This is a large and interesting group of cases and one cannot help but realize that the presence or lack of acid is often a real help either in diagnosis or in treatment or in both.

THE STUDY OF THE PANCREATIC FERMENTS

This has been a neglected field. Most of the tests advanced have been too complicated for clinical use or have been subject to great variations and error. New methods are being devised and tried out. A clinically accurated method of studying intestinal digestion lies in the old Schmidt Intestinal Test Diet with examination of the stool for striated meat fibres, starch and neutral fat. This is the method of choice with the author who believes it should be more routinely used. Newer methods test in various ways for the different ferments in the stool, or the duodenal contents

obtained directly through the duodenal tube. The latter more accurate method has shown that the enzymotic activity of the duodenal contents is seldom low, and that it is normal in achylia and in pernicious anemia. That it is low in chronic pancreatitis, and almost absent in acute pancreatic necrosis, cancer of the head of the pancreas, and lesions obstructing the pancreatic duct. The method is of value in the differential diagnosis between malignant and non-malignant lesions causing jaundice.

THE VALUE OF NON-SURGICAL BILIARY DRAINAGE IN DIAGNOSIS AND TREATMENT

Much work has been done in the past few years in the study of the duodenal contents and bile in the diagnosis of biliary affections.

When the duodenum is irrigated with various substances through a small duodenal tube, there is usually, in a short time, an abundant flow of bile of various colors and consistencies. We have been singularly disappointed in obtaining diagnostic help from a study of this secretion and only in rare instances such as complete obstruction or the findings of rare intestinal parasites is it of value. As regards bacterial findings, the assumption that such bacteria represents biliary disease is, we feel, very unwarranted.

As regards treatment it is our belief that the method has a distinct field in that large number of past-operative gall bladder cases that are still without relief. We would warn, however, against using it in chronic cases before operative interference has done its bit by removing the gall stones or chronically infected gall bladder. In acute catarrhal jaundice this treatment undoubtedly shortens the course of the disease and lessens the incidence of chronic infection and gall stones.

THE VALUE OF LIVER FUNCTION TESTS

The liver is the largest gland in the body. It is the great central laboratory of metabolism and its functions are manifold. In view of our lack of knowledge of all these functions, together with its great functional reserve capacity, we should be careful in interpreting the value of any one functional test. Many tests have been tried out and found not to meet all the requirements. At the last meeting of the A. M. A. this subject was rather thoroughly discussed.

The most recent and promising test is that of the Rosenthal pheno-tetra-chlorphthalein test. This dye, when injected intravenously in a certain amount, is removed from the blood stream by a normal liver in less than one hour. A sample of blood is taken at one hour after the injection and the amount of dye left gives the index of liver function. The test must be more thoroughly tried out in different hands before its value can be determined.

The Widal hemoclastic test has been found to be too variable to be of clinical value. Urobilinogen in the urine is always positive in deficient liver function, but it gives no idea of the amount of liver damage.

THE ROLE OF FAULTY FOOD IN THE ETIOLOGY OF DIGESTIVE DISEASES

McGarrison, whose opportunities for the observation of the effect of diet on man and animals have been very unique, and whose observations have extended over a long period of years, has been able to produce definite endocrine disorders and gastro-enteric pathology in man and monkeys by feeding natual foods from which he has extracted one or more of the vitamines or to which he had added an excess of starch or of fats and starch.

By feeding this faulty food over variable periods of time he was able to produce pathologic processes in the digestive tract such as inflamatory and necrotic changes in the mucous membrane and degenerative changes in the neuro muscular and in the secretory mechanism, manifested by diarrhea, constipation, gastric and duodenum ulcer and general dyspeptic symptoms.

These observations are significant especially when coupled with his observation that in uncivilized races gastro-enteric conditions are very infrequent. During a period of nine years when his operating list averaged more than 400 major operations a year, he never saw a case of peptic ulcer, mucuous colitis or digestive tract cancer. He attributes the infrequency of these conditions to the fact that infants are reared as nature intended them to be, at the breast; the people live on the unsophisticated foods of nature, milk, eggs, grains, fruits and vegetables; and their manner of life required the vigorous exercise of their bodies.

In civilized countries we no longer eat many of our foods in their natural state. The preparation of food for preservation, storage, and transportation alters its value in many instances. Grains have been robbed of a great part of their mineral and vitamine content, we eat white bread. The sterilization or evaporation of milk has decreaser its mineral content. We discard the cartilaginous and tendinous portion of fleshy food. The peelings of many fruits and tubers are discarded and much of the mineral value of these foods is thus lost. We insist on pure white sugar when un-

refined or brown sugar would be nearer our needs. Table salt has been deprived of iodine, calcium and other chemicals which are such an essential part of diet.

There are many other agencies that contribute to the production of faulty food and surely we as physicians should spread the gospel of correct eating and give a warning of the ultimate outcome of faulty, deficient, and unbalanced diet.

FOCAL INFECTION OF THE DIGESTIVE TRACT

It is believed that the prevalent conceptions regarding the relation of focal infection to systemic disease have been too circumscribed in placing the blame almost exclusively on tonsillar, sinus, and dental infection. The removal of these foci are not productive of results, in many instances, because of the failure to recognize the presence of associated intestinal infections, and the part that these hidden infections play in the production and perpetuation of systemic syndromes, as well as digestive tract symptoms.

Intestinal infection may occur during the course of an acute infectious disease and survive in an attenuated form after all manifestations of the acute disease have disappeared. These foci are not often detectable by X-ray examination, and are represented by actual tissue invasion by pyogenic organism, in Peper's patches, mesenteric lymphatics, the intestinal glands and the muscularis.

These local inflamatory areas create local arrest in the proper peristaltic activity, and it seems to me that most cases of chronic appendicitis and many of cholecystitis are but local manifestations of the infective process often widely disseminated throughout the abdomen and especially the large bowel. This, I believe, explains many of our surgical failures.

It is not a far fetched idea that the basic factor back of these chronic foci of infection lies in degenerative changes and diminished resistence of the tissues to bacterial infection, together with generalized weakening of the immunizing mechanism, caused by prolonged, deficient or unbalanced diet. If this explanation of the frequency of low grade foci of infection is true, the cure lies more in general treatment than in the surgical removal of only one or two infected areas when many more exist. The treatment lies in general dietetic, hygenic and medicinal treatment, aimed at raising the patient's resistence to infection.

THE VALUE OF ROENTGEN RAY DIAGNOSIS

There is no other single method that compares in diagnostic value to the fluoroscopic X-ray study, supplemented when necessary, by films for finer detail and permanent record. Its great value has caused a tendency by many physicians to neglect other procedures and accept a negative or positive X-ray report without, often even doing a good physical examination. This is deplorable because from X-ray studies alone diagnosis cannot often be made. X-ray signs are generally caused by rather gross pathological changes and many functional changes are overlooked, such as achylia, colitis, gall bladder disease, etc. There are conditions that can only be shown by the X-ray and it is our belief that every patient presenting digestive symptoms should have a fluoroscopic chest and gastro-intestinal study. However, the X-ray is but one of the many means of reaching a diagnosis, none of which, except in occasional instances, is capable of furnishing the diagnosis per se, but each of which should be used in proper proportion in reaching a probable diagnosis or an absolute diagnosis.

THE RATIONAL ATTITUDE TOWARDS SURGERY

A few years ago there was a feeling that, baring a few purely functional disorders, surgery was indicated in the vast majority of gastro-intestinal diseases, but the years have shown that this is a dangerous and unfounded viewpoint. The effect of rest, environment, soft diet and other post-operative care deluded the surgeon into the belief that the apparent great benefit after surgical procedure represented permanent cure. At first the physicians, to whom the patients returned with a renewal of some, or all of their old complaints, or with new complaints, later many surgeons, and last of all the public at large, realized that in a considerable percentage of cases absolute cure did not take place after surgical procedure. As a result there has gradually grown up a healthy reaction against the ultra-surgical viewpoint.

I am opposed to the view that in all cases of ulcer, adhesions, chronic appendicitis or chronic gall bladder disease, surgery is the immediate weapon to be chosen. I feel that in most cases medical means should be tried first, conscientiously and skillfully, trying to explain the raison d'etre of each procedure, so that the patient's co-operation may be obtained. I know of no field of surgery where complete or almost complete success is less frequently met with, than

in that of chronic conditions in the upper right quadrant, chronic appendicitis, and abdominal adhesions, except it be surgical correction of stomach and intestinal ptosis, or short circuiting operations for intestinal stasis. Think of the unreported surgical failures with which each of you have met.

On the other hand, if surgery is decided upon, I wish to make a plea for proper early and late after care, especially as regards to diet and rest, to reduce failures to a minimum; as I am convinced that many surgeons have a too deeply seated conviction taht functional disturbances associated with organic lesions disappear immediately after operative removal of the diseased organ or tissue, and fail to appreciate the disturbance of the delicate gastro-intestinal physiology that operative procedure often incites. After all, post hoc is not of necessity proper hoc and cures are often ascribed to certain methods, when in reality, it is not because, but in spite of such methods that the patient improves, and the true curative agents are often those greatest of all therapeutic measures—time, rest and faith.

OBSERVATIONS ON GENERAL INFECTIONS BY BACTERIA*

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The remarks that I shall make are based upon studies of a very large number of medical and surgical cases carried out at various times during a period of over twenty years. The opportunity to make these studies I owe to the kind co-operation of the physicians and surgeons of the Mount Sinai Hospital.

Anaerobic infections will be very little discussed. Our work in that line is not important compared to what has been done by some observers. Nor is this the proper occasion for a discussion of technical questions. It suffices to say that we used 25 c.c. of blood for most of the cultures. The inoculations were made, with and without the addition of ascitic fluid, in plates of agar and glucose agar and flasks of bouillon and glucose bouillon. Until we have an optimum medium, it is necessary to make use of a number of methods. The number of bacteria varied from one colony in 22 c.c. of blood up to so many that they could not be counted. Cultures were observed for from five to seven days, and sometimes longer. In the anaerobic examinations that were carried out we made use particularly of the Veillon method. During the last few years Dr. Leo Loewe has obtained valuable information, not only in connection with unusual organisms, but also in connection with non-hemolytic streptococci by the use of a slightly modified Noguchi medium. It is important to make every attempt to confirm positive results by positive cultures of the blood by bacteriological study of the primary and metastatic foci. Microscopic examination of the blood occasionally gives valuable information, but it is not advisable as a routine method. Post-mortem blood cultures are of value only if they are negative or if they show organisms like the anthrax bacillus, the glanders bacillus, etc. A thorough knowledge of contaminating organisms is important.

In the terminology which I have employed for over 25 years, the terms septicemia, septico-pyemia, and pyemia were found unnecessary. They are unclear and lead to confusion.

When bacteria attack any part of the body we call the resulting lesion a local infection. When the bacteria are present in the blood, we have a bacteriemia, a general infection, or a systemic infection. Secondary foci may be established with or without a demonstrable bacteriemia. These we call metastatic infections (corresponding to co-called pyemia). The term transcient bacteriemia indicates that the bacteria are present for only a short time in the blood. The expression secondary infection is reserved for those cases in which one bacterial infection follows another. A secondary infection of the blood is called secondary bacteriemia. For the occurrence of a bacterial infection in the course of a disease not bacterial in origin, the term intercurrent infection is advisable. By a mixed infection we mean the co-existence of an infection by two or more organisms. The term intercurrent bacteriemia and mixed bacteriemia are self-explanatory. An ante-mortem bacteriemia is one that takes place when the patient is surely near the time of death. The designations terminal infection and terminal bacteriemia are generally used to indicate local infections in patients suffering from a chronic disease, who are not yet near the time of death. An operative bacteriemia is one due to the throwing off of bacteria into the blood by an operative manipulation or a dressing.

Although there are numerous cases of infection in which at no time bacteria are

*Abstract of paper read at a General Session of the Michigan State Medical Society, Sept. 11, 1924.

found in the blood, one cannot deny the possibility that such invasion may take place in every case. There are many reasons why bacteria may not be found in the blood when one would expect them to be present. There may be so few bacteria present that the amount of blood used for the culture does not reveal any. The bacteria may have been present in the blood before the culture is made or may not appear until after that time. Bacteria often disappear from the blood for from one to four days after any method of intravenous therapy that causes a febrile reaction, with or without a chill. In cases in which a thrombosis of a large vein is present, pieces of the thrombus may break off and produce metastases, although there is no evidence of free bacteria. Metastatic infections of the bones, the peritoneum and the meninges (and perhaps of the prostate gland) are apt to cause a reinvasion of the blood current. Other forms of metastatic infection are not likely to do so. There are cases of severe local infection with bacteriemia in which the bacteria in the blood may lessen in number or disappear at a time when the focus is not yet taken care of. Infection of the endocardium is set up like any other metastasis, but it is discussed separately because of its peculiar importance.

There is a variety of infections due to bacteria easy of cultivation, which, even when severe, are not apt to be accompanied by an infection of the blood stream. In this group belong infections of the alveolar borders of the jaws, secondary parotitis, pylephlebitis, pyelitis due to pregnancy, peritonitis due to disease of the intestinal tract, and appendicitis. In diabetes, general infections are not as common as one would expect them to be. In erysipelas general infections are infrequent, except when the patient is also suffering from some other serious acute or chronic disease.

Negative blood cultures are of value in distinguishing between rheumatic fever and arthritis or osteomyelitis due to pyogenic bacteriemia. In cases of local infection the prompt disappearance of an existing bacteriemia after an operative procedure, indicates that the infection has, for the time being at any rate, been controlled. A negative blood culture in cases of local infection due to staphylococci or hemolytic streptococci is often of great importance in excluding the presence of an acute bacterial endocarditis. In the differential diagnosis between suppuratin pylephlebtic and acute bacterial endocarditis, negative aerobic cultures point in favor of the former diagnosis.

The staphylococci found in the blood are of three types: the aureus, which is most important, the albus and citreus. When a staphylococcus albus is found in the blood, it is important to make sure that it is not a contaminant from the skin. The staphylococci enter the blood from a number of sources, the most common sites of the primary lesion being the skin or the mucous membranes. The secondary foci may occur in practically any part of the body. Ninety per cent of the cases of general staphylococcus infections have metastases. On the other hand, in cases of general infection by hemolytic streptococci, secondary foci are established in only about 25 per cent of the cases. Endocarditis is established in about one-third of the cases of general infection by staphylococci. Of great interest, and of diagnostic value, is the presence of metastatic pustules in the skin. These occur particularly in young children, and are most commonly located in the skin of the scalp and legs. Meningism is often seen in cases of staphylococcemia, particularly if an endocarditis is present. An erroneous diagnosis of meningitis or other cerebral complication is often made.

The aerobic streptococci are divided into hemolytic, non-hemolytis, or anhemolytic (so-called streptococcus viridans) and the streptococcus mucosus capsulatus. The opinion which Dr. Celler and I have had for many years, that the anhemolytic streptococci represent transition forms between pneumococci and hemolytic streptococci is now receiving much support. From the surgical standpoint, the streptococcus mucosus capsulatus is of particular importance in infections of the middle ear. In its relation to the complicating sinus thrombosis it acts like the hemolytic streptococcus and not like the typical bile soluble pneumococcus. From a practical standpoint, therefore, it is unfortunate that it is often called pneumococcus, type 3.

The most common causes of general invasions by hemolytic streptococci are infections arising in the female and male genito-urinary tracts, the tonsils, phlegmons and wounds. Endocarditis quite frequently occurs. Metastatic lesions are apt to develop in the skin, joints, meninges, peritoneum and lungs. The streptococcus mucosus invades the blood current mainly from such foci as pneumonia, empyema otitic sinus thrombosis and otitic meningitis.

Anhemolytic streptococci are found in the blood in a great variety of conditions.*

*See Libman, The Journal of the American Medical Association, 1923, Vol. 83, pp. 813 to 818.

In cases of subacute streptococcus endocarditis they are the most frequent inciting agents of the disease. They are found in almost 10 per cent of the cases of rheumatic endocarditis, most likely being secondary invaders. Accompanied by a clinical picture, they may invade the body from quiescent or active focal infections in the head, or from extensive infections in the other parts of the body, such as phlegmons, post infections, and thrombosis of the lateral sinus. These cocci are very frequently found as secondary invaders. The decision in a given case as to whether or not this type of streptococcus, when present in the blood, represents an invasion from the local infection which is present, depends upon the bacteriology of the local focus. Difficulty arises from the fact that experience shows that organisms can change in the body, so that with a pneumococcus in a local focus, the blood may show an organism of the type of the anhemolytic streptococcus or approximating to it. Similarly, a local infection may yield a hemolytic, and the blood an anhemolytic streptococcus. When anhemolytic streptococci occur as secondary invaders they are usually present in small numbers only and the bacteriemia is usually transient.

Pneumococci are found in the blood mainly in cases of pneumonia, meningitis, infections of the gall-bladder, post-partum infections, and peritonitis. Secondary foci are particularly apt to occur in the joints, the pericardium, the peritoneum, the endocardium and the meninges. Combinations of metastatic pneumococcus endocarditis and meningitis are not at all infrequent.

In the course of my investigations I found that the colon bacillus entered the blood mainly from the genito-urinary tract, the uterus and the gall-bladder. This organism is not as frequent a secondary invader as has been believed. In the absence of a primary focus due to its presence, it is found in the blood mainly in the antemortem period, and occasionally secondary to some disease of the intestinal tract. Herpes is a remarkable complication of general infections by this organism.

Friedlander's bacillus (the bacillus mucosus capsulatus) occurs in the blood more often than is generally realized. It is at times mistaken for the colon bacillus, because a proper capsule stain necessary for its identification is not employed. In connection with the gonococcus and meningococcus, it is important to remember that there is a variety of gram-negative cocci which may occur in the blood current and be mistaken for them.

The influenza bacillus is found in the blood mainly in infections arising in the meninges and the middle ear. It is not generally realized that general infections by the proteus bacillus may be followed by recovery. This occurs almost exclusively when the general infection arises after manipulation in the male genito-urinary tract. The same is true of the bacillus pyocyaneus.

In relationship to general infections, in civil practice, the most important anaerobic organisms are streptococci and the bacillus aerogenus capusulatus. Invasions by the latter organism arises mainly from wounds, the uterus, and the gall-bladder. During the last war, it was found that 60 per cent of wounds showing gas gangrene were accompanied by a bacteriemia and that the figure for recovery in cases of such general invasion was 54 per cent. Patients suffering from severe infections by the bacillus aerogenus capsulatus may show a remarkable bronze color. In cases of severe infection of the gall-bladder I have seen death result from a general infection by the bacillus capsulatus, without any evidence of gas formation being present during life. The explanation of the clinical picture in such cases is usually not discovered. The most important anaerobic streptococcus is the streptococcus foetidus of Veillon. It is an organism which produces a foul odor in culture media and whose growth may be accompanied by the presence of gas. This streptococcus is the most common invading agent in post-partum infections. It has a great tendency to cause thrombo-phlebitis and secondary putrid processes.

Cases of bacterial endocarditis are divided into acute and subacute forms. Subacute bacterial endocarditis is due in over 90 per cent of the cases to anhemolytic streptococci. The influenza bacillus is found in most of the remaining cases. Acute bacterial endocarditis is the type of disease which arises secondarily to active purulent primary foci. While it may be incited by a great variety of organisms, the most common causes are hemolytic streptococci, and staphylococci.

In connection with the presence of typhoid bacilli in the blood, one must keep in mind the cases of typhoid fever that are unaccompanied by intestinal lesions, and secondary general invasions in carriers. The paratyphoid bacillus invades the blood most commonly when a clinical picture resembling typhoid fever is present. In the gastro-enteric form of paratyphoid infection the blood is much less apt to show bacteria. In cases of lobar pneumonia

and cerebrospinal meningitis a careful review of the evidence at hand seems to indicate that there are cases which present a bacteriemia only at the outset; that there are others that are accompanied by a bacteriemia throughout the disease; and that, in the third place, a bacteriemia may occur only toward the end in fatal cases.

According to my experience, the aerobic organisms most commonly found in the blood in cases of post-partum infection are, in the order of their frequency, hemolytic streptococci, staphylococci, anhemolytic streptococci and the colon bacillus. In the study of 142 cases of general infection in the post-partum period, Schottmueller found hemolytic streptococci along with other organisms 46 times, and anaerobic streptococci 50 times. Similarly, in the 89 pus cases of peritonitis occurring in the puerperium he found hemolytic streptococci 28 times and anaerobic streptococci 39 times. It is important to remember that not all general invasions in the post-partum period arise from the uterus.

General infections in cases of osteomyelitis are caused in 72 per cent of the cases by staphylococci and in 17 per cent by streptococci. The streptococcus and pneumococcus cases are generally mild and are apt to involve the epiphysis. Extensive involvement of the shaft of the bone marrow is most commonly due to staphylococcus infections. All cases of osteomyelitis are of course due to previous dissemination of bacteria in the blood. Clinically, one meets in the main with two types of cases. In the first type the osteomyelitis dominates the picture and sets up the bacteriemia, whereas in the second the osteomyelitis appears as one of a number of metastatic infections in the course of a bacteriemia.

In cases of so-called urethral fever, the explanation is very frequently found in the presence of a bacteriemia. The greatest variety of organisms can be found in the blood in such cases. In my experience the most common are hemolytic streptococci, the colon bacillus, the bacillus pyocaneus, anhemolytic streptococci, and the staphylococcus aureus. Mixed infections are not at all uncommon. In cases of pyelonephritis arising without any antecedent manipulation in the genito-urinary tract, I have found that the organisms most commonly found in the blood are the colon bacillus and the bacillus mucosus capsulatus (Friedlander's bacillus). Dr. Hugh Cabot and Dr. Crabtree found that general invasions are very common in cases in which the bladder is drained by means of a permanent catheter.

BACTERIEMIA

It will now be of interest to speak briefly of the significance of bacteriemia. For the purpose of clarity and brevity, I shall confine myself practically entirely to infections by streptococci and staphylococci. There are two further reasons for taking up the subject in this way:

1. Too little is known concerning the mechanism of the bacteriemia by organisms like the typhoid bacilus, the paratyphoid bacillus, etc.

2. Staphylococci and streptococci are the organisms mainly concerned in the types of infection that can be best observed and investigated—such as infections of the skin, subcutaneous tissues, bones, joints, veins, mammary gland, parotid gland, infection of the lymph nodes, adenitis, etc.

When a positive blood culture has been obtained in a case in which a local infection is present, it must be determined whether the bacteriemia is due to the infection or whether it represents a secondary, operative, or terminal invasion. These questions must be settled to a great extent by a careful clinical study of the patient. An operative bacteriemia, exept in the instances in which manipulation in the male genito-urinary tract or a traumatism to the uterus (curettment in particular) sets up a more serious condition, is usually transitory, the blood showing no bacteria after 24 hours. In order to be able to connect a bacteriemia with the local focus, we should find the same organism in the blood and in the lesion. It is therefore essential to make cultures of at least all primary foci.

The bacteriemia which accompanies a local infection has a great tendency to disappear unless complication occurs or endocarditis supervenes. Multiplication is unusual. Encocarditis does not commnoly occur. It is fair, I believe, to state that if there are present 2,000 colonies of streptococci or staphylococci per each cubic centimeter of blood, multiplication is very probable. It is necessary to note, however, that infants may recover after having a number of bacteria in the blood larger than that seen in adults that survive. It is important not to say that a patient has developed an acute bacterial endocarditis until one has definite evidence, because once such a diagnosis is made, nothing more is attempted in the way of possible surgical help. Of the greatest value for the diagnosis of acute bacterial endocarditis is the manifestation which I have termed the Janeway lesion.

It is of interest and importance to know what is the largest number of bacteria that can be found in the blood that is compatible with recovery. For various reasons an exact answer cannot be given. As I have already indicated, it would be larger for infants than

for adults. Furthermore, the figure will depend largely upon the methods used in making the cultures. For the present, I should rather arbitrarily put the figure at 1,500.

During the course of investigations of the bacteriology of the blood made for a number of years by Dr. Celler and myself in cases of infections arising in the middle ear, we saw the opportunity for determining the rapidity with which bacteria leave the blood, after the supply to the blood current has been cut off. In cases of lateral sinus thrombosis the infection is practically always carried into the system by way of the internal jugular vein. It was, therefore, thought that it would be wise to make cultures of blood before and after such resection. In the cases which we studied, the surgeon did not attack the lateral sinus until after he had resected the internal jugular vein. In this way an operative bacteriemia was avoided. I may say, in brief, that we found that, given a number of streptococci up to 72 colonies per cubic centimeter, the blood is almost completely clear of them within one hour. It just happened that in cases having a number of colonies greater than that just mentioned, we were unable to make the post-operative blood cultures early. I believe that when an opportunity for making such cultures within an hour or two after the resection offers itself there will be found a surprising rapidity of disappearance for even the larger numbers of bacteria. In any event, it is evident that after the supply to the blood is stopped, the organisms already in the blood disappear with remarkable rapidity.

The presence of a bacteriemia is at times of diagnostic value. Its importance lies in the possibility that multiplication may take place and that secondary foci may be established—of which endocarditis is the most uniformly serious.

DISCUSSION

Dr. L. H. WARFIELD, Ann Arbor (General Medicine): I find it exceedingly difficult to say anything after we have heard such an address as this. Dr. Libman has crowded into a short hour an enormous amount of data. His illustrations were so apt and his points so well taken that no one can disagree, and when there is no disagreement there can scarcely be any discussion. One can only say that the most significant point, so far as my opinion is concerned, is the teamwork has made it possible for Dr. Libman to carry through such enormously valuable studies. That is one of the points which I think we do not appreciate sufficiently. We have institutes of bacteriology where careful studies are made of organisms, most minute and painstaking studies, but the studies which give us the force in the help that we can give to patients are such studies as Dr. Libman has made with the most competent clinical bacteriologist he can get, and I do not know any place in this country where better teamwork is exhibited, and always has been, so far as I know anything about it. One of the most important places in the country has always been the Mt. Sinai Hospital, and it is due to this teamwork that it has been possible for Dr. Libman to come here today and give us this masterly address.

I do not know of any place in the country where anything better could be done. One cannot help being impressed by the constant interplay of the internist, the bacteriologist, the surgeon and the pathologist in the diagnosis and treatment of these cases. His illustrative cases have shown us what value it is to the patient to have all this intensely interesting and important mass of data.

One of the interesting things is to hear Dr. Libman say that he is becoming convinced that the pneumococcus in the blood after a while may become a streptococcus-like organism. You know there has been a tremendous fight about the so-called mutation of bacteria, and data is accumulating which I think unquestionably proves that there is such mutation taking place under certain peculiar environmental conditions. It seems to me it is not difficult to understand. Bacteria grow so quickly and multiply so rapidly that violent changes in their environment, if we interpret the laws of heredity correctly, might easily cause marked changes, even in morphologic changes, and I thing many who were most violently opposed to the mutation of bacteria are now inclining to the possibility that there may be some gradual mutation of organisms, especially in the pneumococcus-streptococcus group.

It is interesting to hear, also, that Dr. Libman has found in New York that the ear infections were due to the Streptococcus-hemolyticus, the group of organisms which have recently been found in San Francisco to be also the most common source of these infections.

I wish to thank Dr. Libman for his most entertaining address, and feel that we have all profited immensely by his presence here this afternoon.

DR. RICHARD R. SMITH, Grand Rapids: I approach the discussion of this paper with increasing apprehension for I have no knowledge, or no more knowledge of bacteria culture than that of the average surgeon, or perhaps less. I feel, however, that the presentation of this paper today, and the interest with which it has been listened to, is of very important significance. Years ago surgeons learned, often by bitter experience, not to depend too much upon the bacteriologist. The main reason for that was that the bacteriologist knew little of the clinical aspects of the condition with which he dealt. That has now been largely done away with and there is an increasing dependence by the surgeon upon the findings by the bacteriologist, who has come to know closer contact with the patient, and the surgeon has thus learned more of the bacteriological side of the infection.

I feel that every hospital should have not only a pathologist, but a bacteriologist especially skilled in this important branch of medicine, and that the two should work closely together in the clinical aspects of the diseases. I am sure that is true, and that the bacteriologist will render great service to the surgeon, not only in instructing and directing him as to when he shall interfere but, perhaps more important, as to when he shall not interfere.

DR. DON CAMPBELL, Detroit: From time immemorial we have been seeking for the Philosopher's stone, the stone which will produce life protection. In our own profession we have been seeking for the fountain of all knowledge, and I think we have found it in Dr. Libman. What Dr. Libman has told us today touches every branch of medicine, every branch of surgery and

every specialty to which our profession is devoted, and it touches every branch in an extremely vital manner. I would say that as far as my ability to discuss this paper is concerned it is absolutely nil. I know less than Dr. Richard Smith about bacteriology, and that's going some! (Laughter.) The methods of examination, the media that are used, the terminology, are all practically Greek to me. However, there are some things that have been impressed upon me in my own way after an experience of almost forty years in the practice of medicine. One of them is that there are certain things about the specialty in which I am interested which lead me to believe that many times in the past I have seen cases due to bacterium which I did not recognize, but after listening to Dr. Libman I am sure they were of that character. I will mention just a few of those cases because I think they are in line with Dr. Libman's remarks.

I have in mind two cases of severe infection about the orbit, and two instances of death following enucleation of the eye, which is rather unusual. One of these instances of infection around the orbit was that of a young child who had a fistula about the orbit and who died in forty-five days of a cavernous sinus thrombosis. Bacteriologic examination showed an anthrax pustule, and in that case we were undoubtedly in the presence of bacterium.

Another case was that of an abscess about the orbit which resulted in sinus thrombosis, and that patient died of a metastatic pneumonia after about ten days. That, I think, was undoubtedly a case of bacterium in the early days in which we knew very little about it.

The part of Dr. Libman's address which interested me most was, of course, that part which pertanied to infection about the ear. I have long visualized in my mind some of these cases in which we have a symptomatology which makes us believe we are in the presence of sinus thrombosis which are sometimes cases of phlebitis. I believe myself, that the cases of sinus thrombosis are originally cases of phlebitis. The veins become affected first, then abscesses into the antrum and produces an infection in that way.

Dr. Augus McLean years ago did some very good work in the way of thrombosis. He demonstrated, and has been recognized as an authority—especially by those working in gynecology, that no difference what you do to a vein nothing will occur unless there is also an infection. He showed that the veins could be tied or traumatized and unless an infection was present no thrombosis would take place, so I think all cases of lateral thrombosis are preceded by phlebitis.

I was also interested in what Dr. Libman said about some of the lesions occurring in the fundus of the eye. They are, of course, the result of the bacterium and not the cause.

Just one other thing that impressed me very much and brought to mind an instance of the value of close balteriologic diagnosis. I hope you will bear with me for a moment while I recite this, because I believe it will tend to drive home the importance of what Dr. Libman has told us today. The case I wish to mention was that of a woman with an infection of the upper air tract, followed in usual sequence by infection of the middle ear, then by infection of the mastoid process and then, when I first saw him, by all the evidences of a frank meningitis. We put this man in the hospital and made bacteriologic studies of the discharge from his tympanic cavity, being very careful to exclude contamination from the external auditory canal, and we got a clear culture of streptococcus. One would suppose in that type of case that we had a streptococcic meningitis, but examination of this man's spinal fluid bacteriologically showed in his spinal fluid a pure culture of meningococcus. This is not exactly bacterium, but it is an instance I wish to give you as writing home the necessity for a complete and far reaching bacteriologic diagnosis in many of these cases. This man made a complete recovery without operation of any sort following the introduction of Flexner's serum.

DR. EMANUEL LIBMAN, New York City (closing the discussion): I wish to thank the gentlemen for their kindness in taking part in the discussion and for their remarks. The bacteriological work in connection with the cases on which my remarks were based, was done entirely by myself or under my direct attention.

Dr. Warfield has emphasized the question of mutation in the streptococcus pneumococcus group. In 1907 Doctors Buerger and Ryttenberg published a paper showing that changes could occur in the pneumococci, during their sojourn in the body, of such a nature that they acquired new biologic properties. In 1910, Dr. Celler and myself stated that we were not convinced that the anhemolytic streptococci represented a well defined group. We regarded them as transition forms between typical pneumococci and anhemolytic streptococci. Several years later Dr. Aschner published a paper in the Journal of Infectious Diseases, in which he gave all of our observations concerning this subject. Some time after Dr. Celler and I had published our paper, Dr. Rosenow studied mutation outside of the body and claimed to have converted pneumococci into streptococci and vice versa. As far as I have been able to judge, this work was correct. It was much easier for us to observe changes going on in the body than for Dr. Rosenow to produce these changes outside of the body. For a long time opinions were almost entirely against this interpretation, but now strong support has come. In the old Koch Laboratory in Berlin and also in the Virchow Laboratory a number of papers have recently been issued confirming the work which we published in 1910.

Dr. Campbell, when speaking on the occurrence of cavernous sinus thrombosis complicating anthrax, reminded me that I might have mentioned that when an infection of the accessory sinus produces a general infection, it often does so not directly, but by way of setting up a cavernous sinus thrombosis or a meningitis. In connection with the question of sinus thrombosis, we believe that a phlebites practically always precedes the formation of the thrombus. Aseptic sinus thromboses have been noted.

The case which Dr. Campbell cited—the infection of the middle ear, due to a streptococcus complicated by a meningococcus meningitis is significant. Given a case of otitis media, one must remember that not every infection of the middle ear is primary. This condition can occur as a metastatic infection. A good illustration of these conditions in which one finds a different organism in the blood than the main one in the primary focus, is given by the cases of gonococcus infection of the urethra in which one finds a streptococcus in the blood.

DR. CAMPBELL: I would like to ask Dr. Libman if in a case of double mastoid disease in which both mastoids have been operated, and in which the symptomatology of sinus thrombosis occurs, there would be any distinction or difference in the bacteriological content in the vein of the side which has thrombosed. Would there be any difference between the side on which the thrombosis occurs and the side which is not affected?

DR. LIBMAN: This brings up a subject in which I am much interested, namely, what course

to pursue in cases in which there has been an operation upon both mastoid processes, and definite evidences of sinus thrombosis develop. It is often exceedingly difficult in such cases to make up one's mind as to the side on which an exploration of the sinus should be performed. Leutert suggested that cultures be made from both lateral sinuses and that operation be performed on the side on which more bacteria were found than in the peripheral blood. This method has not been found practicable.

My advice in such cases depends a great deal upon the condition of the patient. If the condition is not severe, I advise waiting, unless there is a clear-cut indication to go ahead. If the condition is evidently of such a nature that something must be done, I advise operative exploration of the sinus on the side on which the infection of the mastoid process was more severe. This is practically safe advice to give if the sinus plate has been involved on one side and not on the other. If the sinus on that side is not found involved, the other side can be explored. The second side need be explored at the same time only if the condition is urgent. If no definite evidence of sinus thrombosis is found on either side, I do not recommend ligation or resection of the jugular vein. If evidence of sinus thrombosis is found on one side, the jugular vein on that side can be ligated or resected. If symptoms still continue, it is wise to make sure that there is no trouble in the bulb on the side on which the evidences of the thrombus were found, before exploring the other side. This is especially important, because all one can do on the second side is to stop the flow through the sinus. One cannot ligate or resect both internal jugular veins.

I have been particularly fortunate in those cases in which the sinus plate was eroded on the one side and not on the other. Up to the present time, in the cases of bilateral mastoiditis in which a unilateral thrombosis was present, we found the latter on the side which was more deeply involved at the time the operative procedure on the mastoid processes was performed.

HEMATOGENOUS STAPHYLOCOCCUS INFECTION OF VARIOUS ORGANS ARISING FROM FOCI IN THE SKIN*

D. B. PHEMISTER, M. D.
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Hematogenous staphylococcus infections demand surgical intervention in a higher percentage of cases than those produced by other pyogenic organisms, because of the greater regularity with which they produce abundant pus and tissue necrosis, necessitating either drainage of an abscess or removal of an infected organ. Little attention has been given to the manner in which these infections arise, as compared with the intense interest that has been shown in streptococcus infections arising secondary to lesions of the mouth and nasopharynx. In fact, it has been widely assumed that the mouth and nasopharynx are the portals of entry of nearly all hematogenous pyogenic infections, and eyes have been closed to obvious foci elsewhere from which organisms have gained entrance to the circulation. This has been particularly true of the staphylococcus and the skin lesions, which are by far the commonest ones that can be demonstrated as portals of entry, have been overlooked.

The most important normal habitat of the staphylococcus in man is the skin, since it is an organism that grows and persists most readily in a relatively dry field. On the other hand, the streptococcus, which flourishes and persists longest in moist fields, is found most commonly on the mucous membranes. Since organisms most frequently get into the blood stream from lesions located in those regions which they normally inhabit it should not be surprising that skin foci are found to be the portals of entry for a considerable proportion of hematogenous staphylococcus infections. Any skin lesion may serve as a portal of entry, but the most important ones are boils, carbuncles, infected wounds and blisters. Acne lesions, burns, freezing, smallpox, chicken-pox and a multitude of skin diseases, as dermatitis and eczema, serve as occasional portals of entry.

As to the points of localization of the circulating staphylococci, they may lodge in almost any part of the body. However, certain tissues and organs are predisposed, and different strains of staphylococci may show an elective action on certain tissues. Traumatism, as of muscle, bone or joint, in the presence of a skin focus may be followed by infection at the point of injury. As to the time of onset of the hematogenous lesion, it is usually toward the height or during the decline of the skin infection, but rarely is it at the onset. This suggests that the organisms enter in minute emboli which arise from the breaking down of thrombophlebitic areas in the infected skin. Time is always required for the occurrence of these changes and large emboli from thrombophlebitis in other conditions rarely break loose and cause pulmonary complications during the first week of their existence. Occasionally there is a time interval between the skin lesion and the onset of symptoms in the infected organ. This is particularly true in the case of the kidney.

There may be staphylococcus septicemia secondary to skin foci, without special localization. This is often the case in debilitated infants and in diabetics. The commonest location of hematogenous lesions secondary to skin foci is in the skeleton. The staphylococcus is the cause of about 90 per cent of all hematogenous osteomyelitis, and careful inquiry and search for lesions will reveal that at least 25 per cent of the cases of staphylococcus osteomyelitis result from skin foci. The commonest skin lesions are boils, infected wounds and blisters, during the healing of which the osteomyelitis develops. When a skin focus is absent, the portal of entry usually cannot be definitely estab-

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lished. Presumably it is most frequently the naso-pharynx or mouth, but a clean cut acute infection in that region at the onset of staphylococcus osteomyelitis can only occasionally be made out. Little is known about the entry of staphylococci into the blood by way of the intestines, as it is extremely rare that symptoms or signs of abdominal infection are complicated by osteomyelitis except in typhoid fever, and there the microscopic organism is nearly always the typhoid bacillus.

Hematogenous staphylococcus infection along the urinary tract is of great importance. Hematogenous perinephritic abscess, arising usually from a small cortical kidney abscess and occasionally from localization in the perirenal fat, is nearly always due to the staphylococcus. The portal of entry of the organism is the skin in at least 75 per cent of the cases, judging from the statistics of Jordan, McKenzie and others. In the past four years I have dealt with nine staphylococcus perinephritic abscesses and in eight cases the lesion admitting the organisms was definitely located in the skin. In one case there was bilateral perinephritic abscess and in several cases the appearance of symptoms in the kidney region was delayed until the skin lesion was almost or entirely healed. This is because the small cortical kidney abscess frequently stands for some time before it ruptures and sets up the perinephritic inflammation.

Multiple kidney abscesses, either disseminated or confluent in the form of a carbuncle, are nearly always secondary to boils, carbuncles or wounds of the skin. Pyelitis and prostatic abscess may arise from skin foci. I have seen such prostatic abscesses singly or as part of the picture of pyemia.

Arthritis alone is not as common as osteomyelitis, but it often complicates the latter. When present, it is usually of the acute purulent variety and necessitates drainage.

Acute suppurative myositis is relatively common a fact that seems not to be generally known and it is often multiple. The muscles most frequently involved are those of the calf and thigh, the ilio-psoas and the pectorals. Trauma not infrequently precedes the localization in the muscles, but occasionally there seems to be marked predilection of staphylococci for muscle. I have recently seen ten muscle abscesses develop in a diabetic who had a boil on the back of his neck.

Lesions may be seen in almost any of the structures of the body, as bursae, tendons, pleura, pericardium, endocardeum and even the ductless glands, as the thyroid. The elective action of certain strains on one type of tissue is particularly striking in the case of the skeleton. It is common to see a skin focus produce osteomyelitis and as many as eight or ten separate areas of bone involvement follow in the course of months or years without any signs of localization in other organs.

If one bears in mind the frequent direct relationship between a skin focus and a hematogenous staphylococcus lesion, it is of enormous help in differential diagnosis of deep seated infections. One will also have a more wholesome respect for small skin lesions and give them better professional care. One will not be as suspicious of the teeth and tonsils as has become the average doctor in nearly every case of infection, and one will not be responsible for their unnecessary removal in quite as many cases as is the rule at present.

Since any handling or traumatizing of skin infections may predispose to hematogenous spread, it has been recommended by some that boils and carbuncles not be opened. The squeezing of a pimple on the face has been known to cause serious staphylococcus blood stream infection, and hematogenous infection of various structures have followed operative procedures on skin lesions. However, the incidence of spread as a direct result of incision and drainage of skin abscesses is too small to warrant the total abstinence from operation. Incision and drainage with the avoidance of undue manipulation and squeezing remains the preferable procedure in suppurative skin lesions.

DISCUSSION

DR. HUGO FREUND, Detroit: Naturally, we are continuously looking for foci and, as Dr. Phemister brought out, the question of the teeth and tonsils is so frequently considered, and they are so frequently the chief things we look at that if we do not look further we miss very important. things. I think we, as internists, further overlook the fact that a boil may be the focus of a very bad condition. Internally I think the most distressing thing we see is an acute pneumonia following boils, particularly about the face. Surgeons are so frequently called upon to open a boil, or an abscess perhaps following a pimple of the face, and they are opened and frequently are the source of secondary infections which are among the most distressing things we see in medicine.

I think the very commonest source of metastasis for the abscesses we see in the body is the kidney. The one Dr. Phemister showed of the carbuncle of the kidney is not unusual. Injuries of the lower extremities particularly often metastasize to that region. Another thing in which we see metastasis from a skin lesion is due to fistulae about the perineum. I have seen two brain abscesses following perinal fistulae. One very prominent publisher developed a brain abscess following a skin fistula in the perineal region and both contained the same staphylococcus. One might say that this might not have been purely a skin process, that it may have led into the urethra although the urethra had healed up some time before.

I think another source of metastatic secondary foci occurs from ulceration and varicosities. Varicostities about the lower extremities frequently are neglected and large areas of scar surround small foci that do not heal, and from those we frequently see abscesses of the kidney and probably in the genitourinary tract. Perhaps urologists see more of these, but I have seen several that

I think could be very definitely traced to infections about the extremities.

There is one particular region of the body in which a surface lesion should be considered and that is about the anal region. Too frequently do we overlook examination of the rectum and anus in seeking sources of infection. They cannot be considered a pure skin lesion, but just at the anal margin of the rectum we frequently find small abscesses which may be the cause of serious internal trouble.

DR. MERRILL WELLS, Grand Rapids: Surely the immediate care in the matter of the treatment in this interesting subject is in the hands of the surgeon. Perhaps the only excuse for the internist or the general practitioner is that in these associated conditions that have been alluded to, in pneumonia as mentioned by Dr. Phemister and Dr. Freund and also in the prevention of recurrence, they may be of assistance. The matter of the "resistance of the individual" is a very vague term. Some men question the explanation based upon that vague term "resistance of the individual" to low-grade infections, which so often include the staphylococcus group. However, any type of infection which becomes hematogenous and gives rise to distant lesions should not be considered as a low-grade thing.

One of the most interesting phases of the whole subject of Dr. Phemister was the occurrence of staphylococcus infection in these individuals who have some debilitating disease, diabetics and those individuals who have other causes behind their low resistance, if we may use that term. It seems to me one lesson that we learn and that we find in our own practice is very valuable, is that in the treatment of these cases and in the thorough searching out of the various foci the use of more than one head, or the obtaining of more than one viewpoint, is very well worth while. We should be sure of a thorough examination of the patient from these various measures, such as a low sugar tolerance, to avoid recurrence.

One point Dr. Freund mentioned was local conditions involving disturbance of circulation, such as varicosities. I think that we all overlook the occurrence of areas in the body and other disturbances of circulation which will lower the individual's ability to throw off a staphylococcus infection which would be otherwise of small significance. Therefore, the removal of these things and the correction of dietary measures may be of more importance in these staphylococcus infections than the removal of teeth and tonsils and other offending foci that are so often associated with the staphylococcus and associated groups.

With the use in general medicine of so many vaccines and skin tests it seems that Dr. Phemister's word just now is particularly appropriate, and that a little care in our preparation of the skin in all these tests will save a good deal under such circumstances.

DR. HUGH CABOT, Ann Arbor: There are certain aspects of this discussion with which I am more or less familiar and in which I am much interested. Particularly in the tendency of these localized staphylococcus infections of the skin to invade the genitourinary tract.

Dr. Phemister raised the question of the perinephritic abscess and its connection with this. My own view is that the perinephritic abscess very rarely arises except by organisms which pass through the kidney. The perinephritic abscess is rarely fatal. It is a long, slow-moving process and by the time it is seen by the surgeon or the abscess is drained it is difficult to say what is the underlying condition of the kidney. It is tru that the lesion of the kidney is so slight as to be absolutely undemonstrable in the ordinary case. In a group which we studied very carefully some years ago we were rarely able to demonstrate a kidney lesion, an active suppurative lesion, in any of the cases of perinephritic abscesses. On the other hand, it is difficult, for we might assume that the perinephritic fat is particularly susceptible to this particular type of infection. We know that in a large group of cases they pass through the kidney without doing any particular damage. It has been possible for us in many cases to demonstrate in the urine, otherwise normal, the staphylococci coming from other known lesions. We know they pass through the kidney without apparently more than brushing its surface. We know that they produce very striking lesions of the kidney, to which Dr. Phemister has referred. We infer, and I believe the inference of an isolated, very small group of lesions breaking through the fatty capsule and into the perinephritic space. There is enough pathologic evidence to give a basis for that view. There are enough pathologic specimens showing scars in the perinephritic fat and in the cortex to give evidence that that is the relation, and at present I think it is sound for us to take the view that these are due to the entrance of the cocci through the immediate kidney rather than to take the view that they land with a bang in the perinephritic space and there produce the lesion.

In recent years I have been more interested in the other type of abscess, particularly the pyelitic. I believe these lesions to be very rare. I believe the lesion which we see so commonly was very rarely produced by the staphylococcus, but our very careful studies in the past few years has forced me from that view and now I believe that in perhaps 10 per cent of the lesions which we regard as typical pyelitis, with the colon bacilli and with frequent urination—the typical pyelitis, is due to the staphylococcus and not to the colon bacillus. We have found in a considerable group of cases apparently pure cultures of the staphylococcus and no evidence that the colon bacillus was involved. I am still in doubt and inclined to leave it in your minds, with the hope that you will investigate it, that there is a close connection between this staphylococcus pyelitis and infections of the throat. Many cases which we have examined have been closely connected with infections of the upper air passages, particularly the throat. A number have been connected with acute tonsilitis, two with an acute suppurating otitis media, and one or two with bronchial cases in which the staphylococcus was evident, so I am groping as to the soundness of the assumption that the staphylococcus infections of the throat are likely to produce a lesion of the kidney rather than the other lesions, the carbuncle or secondary abscess of the kidney. I brought this out merely as a suggestion. I am not sure myself, but the trail seems to be a little warm and I am inclined to keep my nose to it.

DR. PHEMISTER: Have you seen any pyelitis as the result of a skin lesion?

DR. CABOT: I have not.

DR. D. B. PHEMESTER, Chicago, (closing): I was much interested in what Dr. Cabot had to say and I agree with nearly all of it. I have not had experience in the management of pyelitis and have not seen much of it in association with genito-urinary surgeons, but I have been skeptical about the entrance of the organism producing the infection through the respiratory tract because of the overwhelming evidence that the other infections, the perinephritic abscess and the kidney abscess, come from the skin. Of course, we know that the streptococcus infections get in through the throat. There is a big group of staphylococcus infections that arise without any apparent focus of infection. Just where the organisms get in is a

matter of conjecture. It may be that many come through the respiratory tract and I think it is possible, as Dr. Cabot suggested, that a staphylococcus of the virulence that will produce pyelitis or with affinity for the tissue that will make it lodge in the kidney pelvis may get in through the respiratory tract, whereas the organism that affects the kidney cortex get in elsewhere. Joseph Koch has done some investigating which tends to support the view that different parts of the urinary tract are attacked by staphylococci of different degrees of virulence.

FACTORS IN SURGERY TO REDUCE MORBIDITY AND MORTALITY*

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DETROIT, MICHIGAN

In the last decade there have been many advances in surgery, which make surgical diagnosis and operative procedures much safer from the patient's standpoint, and in as much as this is the entire factor to be taken into consideration, it is highly important that every condition for the safety of the patient, should be considered in operative procedure.

By the use of all the improved methods of examination, patients will not have unnecessary operative procedures, but when an opertation is necessary, after a careful diagnosis has been made, operation will be much safer, and the symptoms calling for operation will be relieved.

There is probably no factor in surgery that is so unfortunate, both for the patient and the surgeon, as a return of symptoms, after an operation for their removal. This may be caused by incorrect diagnosis, either from incomplete examination, which is often the case, or a faulty summing up of the data obtained. In many cases patients have operations from incomplete data and, when a more thorough and exhaustive study of their case, would have made the diagnosis correct. It is therefore highly important that every means to arrive at the proper diagnosis be used, and that all special examinations, such as X-ray, blood examinations, protoscopic, cystoscopic, etc., be used when there is any indication of their being advisable.

Excepting in the real Emergency operation, no operation should be performed without careful and complete examination of the patient, which should include, urinalysis, qualative and quantative, and complete blood examinations.

PRE-OPERATIVE PROCEDURES

The safety of patients will be greatly enhanced by careful pre-operative measures, especially in certain types of cases. Especially is this true in thyroid cases, both exoptholmic and toxic adenomata. By careful preliminary treatment, many of these cases can safely have a one-stage operation, instead of undergoing the unpleasantness of a two-stage operation, and a physician should so inform himself of a goitre case's tolerance, so that he will not cause them any unnecessary risk by a one-stage operation.

A few days' rest in bed will usually determine the factor of safety in the goitre operation. We doubt whether the metabolic test should be omitted in any goitre with marked toxic symptoms. Patients should not have operations on the thyroid, who are not able to rest comfortably in bed after a moderate sedative treatment, including ice over the goitre and over the heart. Goitre operations should not be performed in the presence of marked gastro-intestinal distress and we doubt the advisability of operation when the pulse rate cannot be brought down to 120 after moderate exertion.

It is highly important in goitre cases that proper type of operation be performed. Patients with toxic adenomata, of course, should not have any ligation, as this type of operation often is fatal, and is not the proper surgical procedure. The reason for unsuccessful operations in toxic adenomata is often that there is not enough of the adenomatous tissue removed, due to incomplete operation. Lugolls Solution M-X t.i.d. will be found very helpful in exopthalmic cases, given four or five days previous to operation. Team work in surgery for toxic goitres is essential. We believe that these operations are performed with greater saftey the first thing in the morning, especially in serious cases. There should be no delay in operation after the patient reaches the operating room. The smoothness of the team work in the operating room will usually mean success for the patient, where indifferent team work may mean disaster. Goitre patients, especially, should have explained to them before operation that the operation is a safe one, and that the anesthetic is absolutely safe. The combination of gas anesthesia, either ethelyne gas or nitrous oxide and oxygen combined with local anesthetic is the safest anesthetic.

Of equal importance is the careful post-operative treatment. Patient with toxic goitre, should have on the operating table or immediately afterwards, large amounts of fluids by mouth, and by hypodermoclysis. Fluids by rectum in these cases are unsatisfactory, and usually cause irritation to the patient as they are quite apt to be restless and unable to retain the solution. Morphine in full doses, properly given, will often be the means of saving many lives, after operations in severe cases. It is

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highly important that the patient be kept quiet, and they may be given large doses of morphine safely, a one-quarter grain every three or four hours until they become quiet or until the morphine effect is noted. The co-operation of the trained House Physician and special nurse is of the utmost importance, and without them a link in the team work would be missing.

GASTRIC SURGERY

In operations upon the stomach, for either malignant conditions or ulcers, etc., it is highly important to note the patient's reserve. This may usually be determined by a few days careful observation in the hospital. Patients with dry skin and dry coated tongue are not in fit condition for operation, and should only be operated in cases of emergency. These patients need large amounts of fluids given by hypodermoclysis if necessary, judicial rectal feeding, and proper alkalinization, and in any operation for resection of the stomach, or the upper part of the intestinal canal, patients should be guarded before the operation, for the certain shock which will follow, unless such precautions are taken. This will mean hypodermoclysis, during the time of operation, and for a day or afterward, or until the patient's condition is good, morphine in large doses, proper position of the patient, etc. In this class of surgery a blood transfusion may be life saving. Patients who are about to undergo such operations should be typed before operation so that no time need be lost in case a transfusion is necessary. We believe that a relatively small amount of blood, from 200 to 300 cc's is more advisable than larger amounts. This can be repeated and in addition glucose solution 5 per cent intravenously should be used.

OPERATIONS ON THE GALL BLADDER TRACT

Operations on the gall bladder tract, are among the safest in surgery, provided the patient's condition has not been endangered by delay after a diagnosis has been made. A certain number of very seriously ill patients will always confront the surgeon, cases with marked biliary sepsis, with chills and fever or jaundice. It is highly important that all of these patients, excepting the septic cases, with chills and fever, where operation is usually an emergency, and delay would only further injure the patient, be brought into the best possible condition before the operation. In cases associated with pancreatitis, operations can be done safely with local anesthesia, combined with ethelyne gas. At this operation only the absolutely necessary work should be done, in the shortest possible time, leaving stones, if necessary, in the ducts, to be removed at a later operation, as there will be a certain number of cases who would survive an operation for drainage of the gall bladder, who will not survive any extensive operation on the ducts. The second operation can easily be performed in two or three weeks afterward, or the gall bladder can be removed at this time, if necessary, or duct operation performed with safety.

We have found the intravenous injection of 5 per cent glucose solution immediately preceding the operation, and three or four hours after the operation very helpful. It seems to give the liver a chance to recover somewhat from the oedema and temporary disability to form glycogen. These patients should also have saline by Hypodermoclysis. In jaundicted patients operations should be avoided whenever possible for a few days. We have noted in a number of cases of cystic duct obstruction and panreatitis that the heart muscle is markedly affected, this may be only transitory, at times the heart will appear like the heart of fibrillation. Usually this condition improves after the operation.

In patients with biliary disease which is accompanied with sepsis, with chills operations performed promptly may save their lives. We have found that the administration of calcium lactate 10 per cent solution intravenously of from 10 to 15 cc's twice a day for three or four days will greatly diminish the blood clotting time. Patients who have a blood clotting time of over seven minutes are very risky for operation, and no operation would be more distressing to a surgeon than the one where oozing continues in spite of the most careful surgery. We have found in some cases of this type that puncture of the liver in three or four places, and insertion of a soft rubber drain at the time of the operation has been of some value. Here again we advise immediately after the operation and for about forty-eight hours the administration of large doses of morphine until the patient's reserve has been somewhat established, along with the intravenous glucose solution and saline by Hypodermoclysis.

OPERATIONS ON THE KIDNEY AND PROSTATE

It is highly important before undertaking any operation on the kidney, to note as far as can be determined the function of these organs, even when the operation is performed for calculus. If no other symptoms are marked, it will be impossible, without careful preliminary examination, to know whether or not the patient has more than one kidney, and it is sometimes found advisable and necessary to do a nephrectomy when a nephrotomy had been planned. It is highly important in cases of traumatic surgery, unless we are very sure regarding the function of the opposite

kidney, that nephrectomy not be performed. By an estimation of the blood nitrogen, and a cystoscopic examination with ureteral catherization, when possible, and advisable, we will be able in great measure to determine the kidney efficiency. In cases where these examinations can not be made, careful clinical examination will usually determine the operation of safety, and a carefully taken X-ray plate will usually show the kidney shadow. It has been found after years of experience that the two-stage operation for prostatectomy is safer than the one-stage in cases of long standing retention, as most of these cases have a damaged kidney, due partly to back pressure and secondary infection.

In certain cases the first stage of a two-stage operation may be the catheterization of the patient with bladder irrigation twice daily for a few days before the second stage is performed. In cases where this procedure seems impossible or inadvisable, a trocar may be used with supra-pubic puncture and a catheter inserted, tied in position and left as long as desirable. In cases where there is not a large retention, more than six or eight ounces, as a rule, with proper elimination and forced fluids the second stage may safely be done after four or six days following the first stage operation.

In the cases of severe sepsis and large amounts of retention, in old men in bad condition, it is better to open the bladder by supra-pubic operation as in a supra-pubic prostatectomy and suture the tube in the bladder securely, so there will be no leaking around the tube. Great care must be used in this type of case, a large tube should not be used or constant drainage be allowed, as this relieves the back pressure too suddenly and would be almost as severe as a primary operation. In this type of patient, we believe that the tube should be clamped, and allowed to drain every three or four hours, and every time the urine is allowed to drain a few ounces of sterile water or saline solution be placed in the bladder. After a few days of this treatment, the bladder may be allowed to empty and be irrigated. Patients who are at all delerious or restless and unable to eat with a fair appetite, are not in proper condition for prostatectomy.

SECOND STAGE OPERATION

The second stage of these operations is best performed with local anesthetic and gas anesthesia, or sacral anesthesia. Certainly, they are not in condition to take ether, on account of the danger of respiratory troubles to which these patients are especially prone. There will be no difficulty in performing these operations with such anesthesia. It is highly important at the time of the operation that the drainage tube, which is used, should also be clamped, as in the first stage operation, this should be carefully guarded for the first three or four days, until the patient's dangerous symptoms have disappeared. These patients should also have, immediately following the operation, large amounts of fluids, both by mouth and hypodermoclysis, and these fluids are very essential to their recovery.

OPERATIONS ON THE UTERUS

In operations for hysterectomy, or on patients who have had bleeding for a long period of time, it will be found that they are often poor risks, and hysterectomy should not be performed until the patient's condition is improved. This may be accomplished by blood transfusions and by radium theraphy. We prefer radium for these cases, rather than X-ray, as we wish to take a specimen from uterine cavity for microscopical examination. If it is necessary to operate later, after such preliminary proceedures, it will be very safe. We have observed that in cases when menorrhagia and metorrhagia have continued for a considerable time, that there will be also myocardial changes, careful attention should be given to this organ in pre-operative treatment by digitalization.

OPERATIONS UPON THE COLON

In operation for intestinal obstruction for any cause, and in appendix operations where there is peritonitis, with distended small loops of bowel, we have found the operation of appendecostomy at the time of operation with additional enterostomy of one or two loops of distended small bowel to be of the utmost value, and we believe life saving in a number of cases. It is questionable if an operation for resection of the colon, or rectum, for malignancy, is ever advisable, without either a preliminary short circuiting operation or enterostomy. Operations for resection of the colon should not be performed until sufficient length of time, following enterostomy, has elapsed, so that the patient has improved and is able to take fluids in large amounts and has a good appetite.

In addition to the above, blood transfusion will be found very effectual, with colonic irrigation through the enterostomy tube.

POST-OPERATIVE TREATMENT

We believe that a marked factor in post-operative treatment is the constant care of the well trained house surgeon, and that nothing is so disasterous as a patient who has gone through a serious operation, not to be under the care of such a physician. We have been sur-

prised many times, after major operations, when patients were apparently in good condition, that as late as the third or fourth day following an operation, such as resection of the bowel or hysterectomy or other major procedures, that there is a post-operative ileus, which may develop very suddenly, and if more attention were paid to the examinations of patients with the hand, under the bandage, if necessary, to see whether or not there is distention, and we watched the pulse more and the temperature less, and felt the skin more and read the chart less, gave saline by hypodermoclysis more and tickled the hemorrhoidal ring less, used the stomach tube more and the hypodermic less, gave more fluids and less conversation, fewer cathartics, which would mean less gas distention; these are only a few of the factors which would reduce the morbidity and mortality following major procedures.

SCIENCE AND SUPERSTITION

A Synopsis of the address given by W. D. Henderson, Ph.D., of the University of Michigan, at the meeting of the Michigan State Medical Society, at Mount Clemens, September 10, 1924.

When the historian of the future takes his pen in hand to make a record of the age in which we live, he, no doubt, will put down as three of the outstanding characteristics of this period of the world's history, first, an account of the economic readjustments through which we are now passing, second, the important place taken by the automatic machine—the iron man—in present day industrial processes, and, third, the amazing penetration of science into every avenue of human activity. While I desire to speak to you primarily of the third factor, namely science as a ruling factor in the world today, I should like, however, in passing, to call attention to certain features of the economic and industrial phases of modern life, because of one or two applications which I shall make later on.

First, then, let us consider briefly some of the economic changes through which we are now passing. Today we are entering the third phase of industrialism, that is to say, the phase of combination and co-operation. The industrial revolution came into being upon the fall of feudalism. The rise of industrialism stimulated expansion in the fields of exploration, conquest, and commercial transportation. The countries of the Old World, especially those of Britain and Germany, rapidly went over from agricultural conditions to industrial conditions. Great manufacturing centers arose, the population of cities multiplied, and the oceans of the world became the marketing highways of such enterprising countries, England, Holland and Germany. We are in the midst of such a change in America—yes, here in Michigan. Thirty years ago 70 per cent of the people in this country lived on farms and 30 per cent lived in cities, towns and villages. Today these figures are just reversed; 70 per cent of our people live in cities, towns and villages, and thirty per cent live on farms. We have seen here in Michigan in the past few years the rise of such great industrial centers as Detroit, Grand Rapids, Flint, Kalamazoo and other cities, into which there is flowing a constant stream of the youth of our country places.

Now the industrial system of the modern world has passed through two distinct phases and is now entering a third stage. The first stage may be called the individual *competitive* stage in which "every man was for himself and the devil for the hindmost." There is an old saying that "competition is the life of trade." The business man soon learned, however, that under certain conditions competition may be the death of trade. In fact, the economic conditions brought about by the competitive system became so bad that the business world conceived the idea of *combination*. We then entered the second stage, namely, the stage characterized by the organization of trustees and monopolies. The great business combinations offered unusual opportunities for expansion and exploitation in the manufacturing and commercial world. Short-sighted "captains of industry" sometimes adopted as their motto the following: "Buy as cheaply as possible, manufacture as cheaply as possible, and sell at the highest possible price." Of course there followed the inevitable reaction to this suicidal economy policy. The politician, always quick to sense an advantage in securing votes, raised the cry, "Down with the trusts." Government interference in business became common and promised dire results. Great business enterprises became unsettled as to their future outlook. Then it was that shrewd minds in the busines sworld saw the importance, not only of combination, but also of *co-operation*. We are now entering the third stage, which may be defined as one of co-operation. This idea of co-operation involves not only establishing an understanding between manufacturer and middleman, but co-operation with the public as well. The motto adopted by many of our great commercial concerns today is not "Buy as cheaply as possible, manufacture as cheaply as possible, and sell at the highest possible price," but it is rather "Manufacture such

a quantity of goods as the public needs, make as good goods as possible, and sell at a reasonable profit." This is the stage so admirably described by Steinmetz in his book on "America and the New Epoch."

Let us now consider for a moment the effect of the "iron man" on certain economic and social aspects of modern life. America uses more automatic machinery per capita than any other country, and Michigan uses more automatic machinery per capita than any other state in the Union. This is true, not because the people of Michigan are more enterprising than are those of any other state, but because we are one of the newest industrial states. Handwork has practically disappeared in most of our manufacturing processes. Shoes are no longer made by hand, the smith no longer makes the bolt which he uses or cuts the thread upon it by hand. Shoes and bolts are made by automatic machines. The work of the automatic machine ranges from the fashioning of a pin to the making of a steel rail. A few years ago I saw in a little shop in Paris an artisan at work upon a lady's shoe. When it was done, he held the shoe in his hand, saying with all the pride of an artist, "I make all of it." Later, when I returned to America I visited one of the great shoe plants of New England and saw there a machine that is capable of putting the soles on 600 shoes in a day. And standing by this machine was a human being, who seemed to me to be little more than one of the insignificant parts of the mechanism. All in the world he had to do was to wiggle his fingers in directing the strips of leather which were fed into the machine. The man did an insignificant part so far as the total process is concerned, and herein arises one of the great economic and social problems incident to the introduction of automatic machinery into our industrial systems.

Take the case of the shoemaker for example. In the old days, he learned his trade after years of apprenticeship. Tis curve of efficiency went up slowly. His work was interesting to him because it was creative. He made all of the shoe, and furthermore, he probably made each shoe a little different from the last. He worked long hours and earned relative low wages.

How is it today with his son? The son goes into the modern shoe factory and masters the machine process in a few weeks. His curve of efficiency rises rapidly and then after a time begins to fall. His work is not creative. He does not make a complete shoe. And, moreover, he lives at a time when industrial and economic conditions are such as to make possible high wages and short hours. As someone has put it, he sleeps eight hours, works eight hours, and has eight hours in which really to live or in which to raise hell. And the question of how much he is really to live or how much hell he is likely to raise, offers a problem for the school, the church, and the social order.

There is still another side to this "iron man" problem. The modern conditions of industrialism make it possible to employ a certain type of human being in the manufacturing process. A high degree of native intelligence is not a requisite in order to tighten "nut 57" for eight hours. The modern tender of the automatic machine receives good wages and is encouraged to buy a home. This, in turn, makes it possible for him to marry early and to raise children who, in turn, if the laws of heredity hold, will be of the type suitable for use in operating future automatic machines and so on, and so on. Now we are informed by those who have studied the subject, that if modern society be divided into two classes, say those of high grade intelligence in the right and those of medium or low grade intelligence on the left (and I am using the word "intelligence" here in the modern psychological sense, meaning thereby inherent native ability) that the rate of breeding on the left is three times as great as that on the right. I suppose that there is not a doctor here today who would question the statement that the way to improve the race fundamentally is by breeding better people. Every breeder of stock knows perfectly well that the only way to improve his stock is to breed better stock. Putting a coat of paint on the barn or a fine fence around the barnyard may help a little, but in the long run it will not produce a better breed of animals. And what is true of the lower animals is equally true of humans. This question of general intelligence of human beings is of special significance to men who, like yourselves, are engaged in the practice of a profession which touches humanity in a very personal way. This question is worthy of your consideration: "Are we, as a people, becoming, as a whole, more intelligent or less intelligent?" You understand, of course, that I use the word "intelligence" in its technical sense. When I speak of a man's intelligence, I do not refer to the degree of knowledge which he possesses, but to his native mental ability.

And now I come to the third and most significant characteristic of modern life, namely, the *scientific* phase. One of the most characteristic features of modern life is the amazing rise of science and its dominance in every avenue of our activity. Carlisle said "Without science, man is one of the weaklings of the earth." He cannot run as the horse or swim

as the fish or fly as the bird. The bull tosses him like a rag over the fence. But put the tool in his hand, the tool made possible by science, and he becomes king of the earth. Today he can run more swiftly than the horse, he can outswim the fish, and he can do what no bird has yet done, fly around the world. Science, as I have said, enters every avenue of life. We see its application on every hand, in workshop and field in office and kitchen. And furthermore, it is interesting to note that as science advances people everywhere, men and women and children in general accept its findings readily. We use the telephone and the electric light and the adding machine and the phonograph. Even the children in our homes have adopted the technical language of science as applied to the radio and they talk in easy terms of "inductence," "capacity," and "wave length."

Right at this point I want to call attention to something that is in some respects even more remarkable than the dominance of science, and that is *the slowness with which we accept the findings in their application to our bodies,* that is, as applying to health. We are interested in and read about and study and buy radio outfits. We take for granted the air mail and the violet ray. Yet, at the same time there are thousands of people who question the value of vaccination and even resist this precautionary measure even unto death. It is a surprising thing, yes startling, when we realize that over one hundred years after the birth of Louis Pasteur we here in Michigan are giving health lectures in some of which we are trying to convince people that there is such a thing as a germ basis of disease.

Now this slowness on the part of humanity to accept the findings of science as applied to the body, is beginning in these latter days, to bear fruit in certain surprising directions. The medical man, purveyor of modern scientific methods, is beginning to feel that somehow or other, he is looked upon in certain quarters with suspicion, if not with actual antagonism. There is hardly a medical society meeting which takes place in which there are not incidents related in which antagonism to the medical profession is shown. As an illustration of this, there was made last year an investigation by the State Medical Society of Illinois in which they attempted to find out what the public today thinks about the doctors. The committee was appointed to make a personal study of this question, five sections of Chicago and surrounding territory being selected. These five sections were chosen so as to represent as nearly as possible a cross section of the entire population of the state. It was thought that the regions selected would give about a fifty-fifty break above and below a medium line based on property qualifications. Now what did the committee find? I quote from the October number of the Wayne County Medical Society Journal, 1923: "A total of 6,672 persons were interviewed. Of this number only 931, about 13 per cent, was definitely in favor of doctors. Some few said that if they were dangerously ill and likely to die, they would probably call a doctor, but otherwise not. This leaves 5,841 who are directly against doctors and more or less directly for the other fellow."

Now, I am not inclined to take this report too seriously. To me the significant thing is not the report itself, but that the State Medical Society of Illinois, or any other society, should even think it necessary to undertake such an investigation. There is no question that many people have come to look upon the medical profession with suspicion. I have spoken in practilally every town, village, and hamlet in the state of Michigan and have come into contact with nearly all phases of society. I have learned some things as to what people think about doctors. If I were to tell you some of the things I have heard people say about you, it would make your hair stand on end.

Now, the important question here for us today is not how much the public has confidence in or holds distrust for the medical profession. The two questions of importance which arise are these: First, *how can we explain this attitude of the public?* And, second, *what is to be done about it?* These are the important questions.

Why are some of the people today suspicious of doctors? There are, it seems to me, three reasons, possibly many more, to explain this condition. First, I think that doctors, themselves, are partly to blame. The education of the modern medical student is of such a nature as to make him impatient with the foibles of the ordinary mortal. He is trained in the laboratory after the most accurate and scientific methods. He has small patience for "rule of thumb" or "the laying on of hands." And moreover, he is very frequently inclined to look upon his patient as a "case" and to forget that the practice of medicine involves two things, namely, first the application of modern science to the art of healing, and second, the factor of human nature. The doctor has to deal with human beings, and he must take into account the fact that human nature is what it is. The time may come when in every first class mdeical school there will be given as a part of the regular curriculum, a course in the study of human nature. When a person is sick he is not normal. He requires sympathy. He responds to the touch

of treatment as well as to the application of the knife and the antiseptic lotion. The "laying on of hands" is an old art. It is still in practice and so skillful are some of the gentlemen who practice it today that they not only lay hands upon their patients, but also upon their pocketbooks as well.

And what I have said of physicians applies equally as well to nurses. In speaking to a doctor recently with reference to nurses, I asked him what qualifications he prized most in a nurse. He answered promptly, "A thorough training, and a sympathetic feeling for the patient." It pays to be sympathetic.

In the second place, the suspicion on the part of the public for the medical profession has come about because of a certain type of news propaganda which is constantly running in our papers and especially in our second and third-rate magazines. For example, a year or so ago there appeared in one of our prominent popular magazines a leading article which covered pages with elaborate illustrations, in which there was an attempt made to demonstrate how a certain "medical" gentleman in the far west, with a crude contraption of batteries and wires inclosed in a box could make use of electrons to diagnose all known human ills." This bit of advertising was not only worth thousands of dollars to the concern in question, but it gave all sorts of wrong notions to the readers of this particular publication.

This morning on the way from Detroit to Mount Clemens I talked with a surgeon, a man who stands high in medical practice in Michigan, who told me of a wonderful operation which was recently performed upon a man, an operation, the successful outcome of which marked it almost as a modern miracle. Of course, not a word of this operation appeared in the morning paper. On the front page of the paper, however, there was an account of a man in a certain part of North America who visited a shrine and while kneeling in prayer felt, to use his own words, "health surging through me." He threw away his crutches and came forth praising the Lord, and denouncing doctors. Again, last year I was scheduled to give an address before the Kalamazoo County Medical Society. Just before taking my taxi for the station I stepped into one of the local Ann Arbor bookstores and picked up the first magazine that came to my hand with the thought of having something to read on the train. On looking over the table of contents I noticed an article by a well-known propagandist on the subject of "Drugs, Doctors, and Surgeons." I hold this magazine in my hand. It is dated November 23, 1923. I shall read for your edification a few extracts from this article which is typical of similar articles which are appearing in many of our publications.

First, note the following bit: "Christian Scientists seem to be in better health than their fellow men, chiefly because they religiously keep away from drugs and doctors."

From Sir William Osler: "Of the action of drugs we know little, yet we put them in the bodies of which we know less, to cure diseases of which we know nothing at all." Perhaps Dr. Osler did say this. The magazine, however, does not tell us in what connection he made this quotation which as most of you know, was made long before Osler's day.

And again, "The Director of the Massachusetts General Hospital said recently that according to postmortem examinations 47 out of every 100 cases in his own hospital were wrongly diagnosed and consequently wrongly treated."

Dr. Lick, speaking at a convention of the American Medical Association: "Out of 1,000 cases operated upon for chronic appendicitis, only 100 were found to conform to the diagnosis."

And finally, a quotation from Professor Gregory of Edinburgh, Scotland: "Iinety-nine out of every 100 medical facts are medical lies and medical doctrines are for the most part stark, staring nonsense." This, my friends, is the kind of publicity you are getting.

In the third place, people quite naturally follow after quack methods and patent medicines and have a suspicion of scientific medicine, because in the last analysis, human nature is essentially superstitious. Man is not only a scientific being, but he is at the same time a scperstitious being also. From the very beginning, history informs us, he has had a belief in the medicine men, in witches, and in signs and portents. If the sale of patent medicine today and the investment of hard cash in methods of treatment of diseases offer any indication, I think I am safe in saying that man is about as superstitious now as he ever was. The fact that we use more patent medicines per capita than any other people on the face of the earth, is an awful commentary upon the intelligence of the American people. Many a man who is intelligent, or supposed to be intellipent, will take great pains in electing a machinist to look after his car, and on the other hand will dope his body with all sorts of patent medicine upon the recommendation of some neighbor or some skillfully worded advertisement.

In conclusion I come to the last question, namely, what is to be done? Well the only way to combat superstition is by education. Years ago many farmers believed that potatoes should be planted in the full of the moon

and beans in the dark of the moon. Our agricultural colleges planted potatoes and beans in the reverse order, so far as the phases of the moon are concerned, side by side with those of the farmer who followed the methods dictated by superstition, and demonstrated that the moon has nothing whatever to do with raising potatoes and beans. I repeat the only way to get rid of superstition is by education. The only way to abolish darkness is to admit light. Big business, as I indicated in the beginning of my address, was quick to see the necessity of taking the public into its confidence and of organizing a campaign of education. Only last month a whole page was taken in one of our Detroit papers and also in other papers throughout the country by a great public service corporation which sought to educate the public as to its methods of doing business. The Bell Telephone Company, for example, does not hesitate to attempt to win the confidence of its patrons through the medium of publicity. Railroads and other great corporations are practicing these same publicity tactics. Even the banks, conservative of conservatives, conduct educational campaigns through the press. In other words, industrial and financial corporations have frankly undertaken to educate the public with reference to their respective types of service.

So far as methods of publicity are concerned, however, the modern doctor is a hundred years behind the times. Too often he maintains the attitude of the old railroad president of a score of years ago, whose policy was said to be expressed by the sentiment, "The public be damned!" My friends, you cannot adopt this policy. If you do, the public will be likely to be the one that will do the damning. You must take the public into your confidence, which is simply another way of saying that you must carry on a program of education which seeks to inform the people as to methods, aims, and functions of modern scientific medicine.

Allow me here to call attention to the fact that we have undertaken here in Michigan a program of Public Health Education which is in a way unique. This program is under the direction of the State Joint Committee on Public Health Education. This Committee was organized upon the initiative of your State Medical Society. There are at present eight co-operating organizations, namely: Michigan State Medical Society, University of Michigan, Michigan Department of Health, Detroit College of Medicine and Surgery, Michigan State Dental Society, Michigan Tuberculosis Association, Michigan State Nurses' Association, and Michigan State Conference of Social Work. Two years ago we began assigning approved members of the medical and allied professions to give health lectures through the state. The work was begun as an experiment. I am happy to announce that the experimental stage has passed and that our Public Health Education Program is undoubtedly destined to play a very important part in the education of the public with reference to the aims and functions of scientific medicine. This work is carried on through the Extension Division of the University of Michigan, this Division serving simply as a medium between the physician as a teacher and the public as a learner. You will be interested to know that last year, the second year of our program, the number of lecture assignments wam nearly 50 per cent greater than that of the year before, and that the increase of more than 160 per cent. Last year health lectures were given to a total audience of 79,000 people.

We have on our speaking staff at the present time about 130 speakers, chosen mainly from the ranks of the doctors of the state. We need more speakers, however. Last year we were unable to supply the demand upon us for speakers. Out of 4,500 doctors in the state of Michigan we should have at least 300 who are willing to devote a little time to this matter of the education of the public. What the Joint Committee needs and what the public is willing to listen to is the medical man who has a definite message that can be put over to an audience in from 45 minutes to an hour—not over an hour. This message should be spoken, not read. The speaker should always give his audience a chance to ask questions. Very frequently the most important part of these so-called health lectures comes about through the free discussion of the subject in hand.

I said a few moments ago that our Health Education Program is in some respects quite unique. I have received letters of inquiry from many of the important Medical Associations of the country, asking for information with reference to our plan of doing this work. I have not the slightest doubt that within a few years that Health Education Programs will be conducted in every state in the Union and possibly the movement may take on a national character. When this work was organized in Michigan there were some of you doctors who were very doubtful as to its value. I have every reason to believe that the doctors of Michigan are coming to look upon our education program as an important factor, both from the viewpoint of the profession and the viewpoint of public service.

What we need for next year is a larger staff of speakers.

Constitution and By-Laws of the Michigan State Medical Society

ARTICLE I.—NAME OF THE SOCIETY

The name or title of this organization shall be the Michigan State Medical Society.

ARTICLE II.—PURPOSES OF THE SOCIETY

The objects of the Society are to promote the science and art of Medicine and the betterment of Public Health and with other State Medical Associations to form the American Medical Association.

ARTICLE III.—COMPONENT MEDICAL SOCIETIES

Section 1. The terms, "county medical society" and "component county medical society" shall be deemed to include all county medical societies now in affiliation with this Society, or which may hereafter be organized and chartered by the Council.

Sec. 2. There shall be but one county medical society in each county affiliated with this society.

Sec. 3. If there should be an insufficient number of physicians and surgeons in any of the counties of this state to form themselves into a medical society, such physicians may become members of the component county medical society of an adjoining county when eligible according to the Constitution and By-Laws of such society of such adjoining county.

ARTICLE IV.—COMPOSITION OF THE SOCIETY

Sec. 1. This Society shall consist of members and honorary members.

Sec. 2. The membership of this Society shall consist of members in good standing in the component county medical societies, whose annual assessments in this Society have been paid.

Sec. 3. Only members in good standing shall participate in the deliberations and activities of the Annual Meeting.

Sec. 4. Any person who is under sentence of suspension or expulsion from a component county medical society, or whose name has been dropped from its roll of members, shall not be entitled to any of the rights or benefits of this Society, nor shall he be permitted to take part in any of its proceedings until he has been relieved of such disability.

Sec. 5. Delegates to this Society from any state or territorial medical association entitled to representation in the American Medical Association shall, by presenting certificates of delegation duly signed, be entitled to participate in the scientific business of this Society. They shall not be entitled to vote, nor to hold office, nor be eligible to membership.

Sec. 6. Any physician of reputable standing not a resident of Michigan, but a member of his own state or territorial medical association, after an introduction by a member present, may be accorded the privilege of participating in the scientific discussions.

Sec. 7. Resident honorary members shall be chosen from those who have practiced medicine not less than twenty-five years and have been active members in good standing of this Society for at least ten years. They shall be nominated by the Council at any of its meetings and may be elected by a majority vote of the House of Delegates at any Annual Meeting. They shall have all the privileges of the Society and receive all publications without payment of dues. Not more than five resident honorary members shall be elected at any one meeting.

Sec. 8. Any distinguished physician, not a resident of this state, may be elected an honorary member, provided he has been nominated by the Council at a previous meeting. Not more than two non-resident honorary members shall be elected at any one meeting.

Sec. 10. Scientists occupying teaching positions in medical institutions of the state, and not possessing a medical degree, may be elected honorary members by a three-fourths vote of the House of Delegates at any annual session.

ARTICLE V.—HOUSE OF DELEGATES

Sec. 1. The legislative powers of the society shall reside in the House of Delegates. The House of Delegates shall transact all the business of the Society not otherwise specifically provided for in this Constitution and By-Laws and shall elect the general officers, except the Presidednt. The House of Delegates shall adopt rules and regulations for its own government and for the administration of the affairs of the Society.

Sec. 2. Composition. The House of Delegates is composed of delegates elected by the component county societies. Each county society shall be entitled to send to the House of Delegates each year one delegate for every fifty members and one for each additional major fraction thereof; but any county society which holds a charter from this Society and has less than fifty members shall be entitled to send one delegate, if its annual report has been made as provided in the By-Laws of this Society.

Sec. 3. Officers of the Society shall be ex-officio members of the House of Delegates without power to vote.

Sec. 4. The House of Delegates shall provide for a division of scientific work of the Society into appropriate sections and for the organization of Councillor Districts.

ARTICLE VI.—SESSIONS AND MEETINGS

Sec. 1. The Society shall hold an annual meeting at such time and place and of such duration as the Council may determine. The session shall be open to all registered members, delegates and invited guests.

Sec. 2. Special meetings of the Society may be called for general session on the petition of the Council or by petition signed by 250 members, or upon petition of forty delegates registered at the previous regular session. The call for regular and special sessions shall be issued by the President and Secretary, complying with these provisions, and shall go forth not later than ten days before the proposed date of holding a regular or special session.

Sec. 3. Special meetings of the House of Delegates may be called by the Council, on a petition signed by thirty delegates who served at the last regular session of the house.

ARTICLE VII.—THE OFFICERS

Sec. 1. The general officers of this Society shall be a President, four (4) Vice-Presidents, a Secretary-Editor, a Treasurer, a Speaker and a Vice-Speaker of the House of Delegates, and a Board of Councillors of such number as the House of Delegates may fix from time to time.

Sec. 2. The President and Vice-President shall be elected for a term of one year. The Secretary-Editor and the Treasurer shall be elected by the Council at its Annual Meeting in January each year, and shall hold their offices for one year. The Councillors shall be elected for terms of five years each, these terms being so divided that Councillors shall be chosen each year. All of these officers shall serve until their successors are elected. Provided, that the present Councillors' terms of office shall expire as follows:

Councilors for Districts 1, 2 and 3—1925.
Councilors for Districts 4, 5 and 6—1926.
Councilors for Districts 7, 8 and 9—1927.
Councilors for Districts 10, 11 and 12—1928.
Councilors for Districts 13 and 14—1929.

Sec. 3. The officers of this Society shall be elected on the last day of the annual session. No person shall be elected to any such office who has not been a member of this Society for at least five years.

Sec. 4. Nominations for President shall be made from the floor of the first General Meeting. He shall be elected by a ballot of the majority present at the last General Meeting of the session. All nominations for Councillor shall be by a majority vote of the delegates from each respective district and shall be reported for election to the House of Delegates. The Delegates from these Districts electing Councilors shall be called together by the Secretary at the annual meeting for the purpose of nominating successors to those whose terms expire in that year. Other officers shall be nominated and elected by a majority vote of the House of Delegates as hereinafter provided.

ARTICLE VIII.—THE SCIENTIFIC ASSEMBLY

Sec. 1. The Scientific Assembly of the Michigan State Medical Society is the convocation of its members for the presentation and discussion of subjects pertaining to the science and art of medicine, its allied specialties, and the problems of public health conservation.

Sec. 2. The Scientific Assembly is divided into sections, each section representing that branch of medicine described in its title.

Sec. 3. New sections may be created or existing sections discontinued by the House of Delegates. The Scientific Assembly and its sections shall be conducted in accordance with the provisions of the Constitution and By-Laws.

Sec. 4. The program for the Scientific Assembly shall be arranged by the committee on scientific work. shall be arranged by the Committee on scientific work.

ARTICLE IX.—FUNDS AND EXPENSES

Sec. 1. The amount of the annual membership dues shall be fixed by the House of Delegates.

Sec. 2. Funds of the Society shall only be disbursed on order or action of the Council. Disbursement of funds shall only be made by voucher signed by the Chairman of the Council, Secretary and Treasurer. No single officer, Councilor or Committee shall have authority to disburse any of the Society's funds.

Sec. 3. Funds derived from whatever source or for whatever purpose shall be delivered to the Secretary for deposit with the Treasurer.

ARTICLE X.—REFERENDUM

The General Meeting of the Society may, by a two-thirds vote, order a general referendum upon any question pending before the House of Delegates, and the House of Delegates may by a similar vote of its own members, or after a like vote of the General Meeting, submit any such question to the members of the Society for a final vote; and, if the persons voting shall comprise a majority of all the members registered at the session, a majority of such vote shall determine the question and be binding upon the House of Delegates.

ARTICLE XI.—THE SEAL

The Society shall have a common seal, with power to break, to change or to renew the same at pleasure.

ARTICLE XII.—AMENDMENTS

Sec. 1. The House of Delegates may amend any article of this constitution by a two-thirds vote of the delegates registered at an Annual Meeting, provided that such amendment shall have been presented in open meeting at the previous annual session.

Sec. 2. This constitution shall become effective immediately upon its adoption.

BY-LAWS

CHAPTER I.—MEMBERSHIP

Sec. 1. All members of the component county societies who are not in arrears for dues, shall be privileged to attend all meetings and to take part in all the proceedings of the Annual Session, and shall be eligible to any office within the gift of the Society except as otherwise provided.

Any member in arrears for dues to the amount of one year or more may regain membership either by paying up all back dues or by being again elected to membership at the option of the county society.

Sec. 2. Members shall register at each annual session.

CHAPTER II.—GENERAL MEETINGS

Sec. 1. The General Meetings shall include all registered members and delegates who shall have equal rights to participate in the proceedings and to vote on pending questions. Each General Meeting shall be presided over by the President or, in his absence, by one of the Vice-Pres dents.

Sec. 2. The following shall be the order of business of the first General Meeting:

1. Call to order.
2. Invocation.
3. Address of welcome.
4. Report of the House of Delegates.
5. President's address.
6. Special addresses.
7. Resolutions and motions.
8. Nominations for President.
9. Appointment of Committees.

SECOND GENERAL MEETING

1. Call to order.
2. Report of House of Delegates.
3. Report of Committees.
4. Resolutions.
5. Election of President.
6. Introduction of President-Elect.
7. Adjournment.

Sec. 3. The General Meeting or any of the sections may recommend to the House of Delegates the appointment of committees or commissions for scientific investigations of special interest and importance to the profession and the public.

CHAPTER III.—HOUSE OF DELEGATES

Sec. 1. A delegate must have been a member of the Society for at least two years preceding his election.

Sec. 2. The House of Delegates shall meet annually at such date as is designated for the Annual Meeting of the Society. It shall adjourn from day to day as may be necessary to complete its business, specifying its own time for the holding of its sessions.

Sec. 3. Thirty members shall constitute a quorum.

Sec. 4. A delegate once seated shall remain a delegate through the entire session and his place shall not be taken by any other delegate or alternate.

Sec. 5. The officers of the House of Delegates shall be Speaker, Vice-Speaker and Secretary, who shall be the Secretary of the Society.

Sec. 6. (a) The House of Delegates is the legislative body of the Society. It has authority to adopt and institute such methods and measures as it may deem most efficient for the upbuilding and establishing of the interests of the profession in Michigan.

(b) It shall concern itself and advise as to the interests of the profession and of the public in those matters of legislation pertaining to medical education, medical registration, medical laws and public health.

(c) It shall be active in the education of the public in regard to medical research and scientific medicine.

(d) It shall elect delegates to the American Medical Association in accordance with the ruling of that parent organization.

(e) It shall divide the state into Councillor districts and direct the formation of District Societies.

(f) It shall have authority to appoint committees,

standing or special, from among its members or the members of the Society. Such committees are to report to the House of Delegates and their members may participate in the debate upon their committee's report.

(g) It shall approve all memorials and resolutions in the name of the Society before the same shall become effective. Provided, that in the interim, in the presence of necessity for prompt action, the Council is empowered to act in behalf of the Society.

(h) It shall elect the four Vice-Presidednts, Councillors, Speaker and Vice-Speaker. The Council shall elect the Secretary-Editor, Treasurer and Chairman of the Medico-Legal Committee. The President shall be nominated and elected in a General Meeting.

(i) The House of Delegates shall provide for the division of the scientific work of the Society into appropriate sections. It shall prescribe the rules governing the meetings of these sections and the election of section officers.

(j) It shall present a summary of its proceedings at the General Meetings of the Society and publish its minutes in The Journal.

(k) It shall have the following standing and business committees, appointed by the Speaker.

1. Committees on—
   (a) Reports of Council,
   (b) Reports of Officers and Committees,
   (c) Miscellaneous business,
   (d) Special committees.

(l) No new business shall be introduced in the last session of the house without unanimous consent of the delegates except when presented by the Council. All new business so presented shall require three-fourths affirmative vote for adoption.

(m) Robert's Rules of Order shall govern the House of Delegates when not in conflict with the Constitution and By-Laws.

CHAPTER IV.—SECTIONS

Sec. 1. Sections shall hold meetings at such time and place as will not interfere with General Meetings.

Sec. 2. Sections are subject to the rulings and regulations provided by the House of Delegates for their government.

Sec. 3. At each Annual Meeting, a section chairman shall be elected by the members of each section to preside at the following Annual Session. A Secretary shall be chosen by each section every second year to serve for two years or until his successor is elected.

Sec. 4. The program of each section shall be arranged by the Scientific Committee of the Society.

Sec. 5. No paper shall be presented, the reading of which consumes more than fifteen minutes. No paper shall be read by title without the consent of the section members. Discussions shall be limited to five minutes. Papers and discussions presented before any Section or General Meeting become the property of the Society and shall not be published elsewhere than in the Journal of the Michigan State Medical Society without the consent of the Publication Committee of the Council.

Sec. 6. Each section may appoint committees which shall investigate and report back concerning such matters as are of especial interest to such sections.

Sec. 7. The following sections shall compose the scientific assembly of the Society:

1. General Medicine.
2. Surgery.
3. Obstetrics and Gynecology.
4. Ophthalmology and Oto-Laryngology.
5. Pediatrics.
6. Public Health.

CHAPTER V.—ELECTION OF OFFICERS

Sec. 1. All election of officers shall be by secret ballot and a majority of votes cast shall be necessary to elect. In the event that there is but one nominee for a given office a viva voce vote may be taken.

Sec. 2. The House of Delegates shall be the electoral college.

Sec. 3. The Speaker and Vice-Speaker shall be nominated from the floor of the House of Delegates.

Sec. 4. A nominating committee shall be elected by the House of Delegates. The duty of this committee is to nominate candidates for Vice-Presidents, Delegates and Alternates to the American Medical Association, and all other officers that may be hereafter provided for.

Sec. 5. The election of officers shall be the first order of business at the last session of the House of Delegates.

Sec. 6. The Secretary-Editor, Treasurer and Chairman of the Medico-Legal Committee shall be elected by the Council.

Sec. 7. The term of a newly elected officer shall begin at the adjournment of the House of Delegates and shall continue until his successor is elected.

CHAPTER VI.—DUTIES OF OFFICERS

Sec. 1. The President shall preside at all General Meetings of the Society, shall fill all vacancies in offices and committees in consultation with the Council unless otherwise provided for; shall appoint the members of all committees not otherwise provided for; shall deliver the President's annual address; shall, as far as practicable, visit component county societies. He shall have a voice in the deliberations of the House of Delegates; he shall be ex-officio a member of the Council.

Sec. 2. The Vice-Presidents in the order of their seniority shall perform the duties of the President in his absence or upon his request. In casae of the death, or resignation of the President, the First Vice-President shall officiate at the next Annual Session.

Sec. 3. The Treasurer shall be the custodian of all the funds and securities of the Society. He shall be elected by the Council and accountable through the Council to the Society. He shall disburse no funds except upon vouchers signed by the Chairman of the Council, the Secretary and the Treasurer. The funds of the Medico-Legal Committee shall not be disbursed except on vouchers signed by the Chairman of the Medico-Legal Committee, Chairman of the Council and the Treasurer. He shall invest the surplus funds of the Society only on approval of the Council.

Sec. 4. The Secretary-Editor shall be the custodian of all the records of the Society, he shall conduct all the official correspondence of the Society at the direction of the House of Delegates, the Council and the officers of the Society. He shall be the Recording Officer of the House of Delegates, the Council and the Scientific Assembly and ex-officio member of those bodies. He shall also discharge the following duties:

1. Collect membership dues, keep membership records and issue membership certificates.
2. He shall conduct the correspondence with component county societies.
3. He shall make all required reports to the American Medical Association.
4. He shall act as one of the delegates to the American Medical Association.
5. He shall deposit all funds received with the Treasurer.
6. He shall render an Annual Report to the Council reviewing the Society's activities and imparting recommendations for the advancement of the Society's interests.
7. He shall perform such other duties as the Council may direct. Under the direction of the Council he shall be the Editor and Business Manager of the Journal, performing all duties concerned with the issuance of that publication.

8. He shall superintend the making of all arrangements for the holding of all meetings in compliance with the Constitution and By-Laws and the instructions of the Council.
9. He shall send out all official notices of meetings, committee appointments, certificates of election to office and special duties of committees.
10. He shall receive and transmit to the House of Delegates and the Council all committee and officers' reports.
11. He shall be elected by the Council and shall be remunerated by a salary, the amount of which shall be fixed by the Council.

CHAPTER VII.—THE COUNCIL

Sec. 1. The Council is the executive body of the Society. It shall determine its own time and place of meeting. It shall elect its own Chairman and Vice-Chairman to serve one year. Its annual meeting shall be held co-incident with the annual meeting of the Society.

Sec. 2. Collectively, the Council shall be the Board of Censors of the Society. It shall consider all questions involving the right and standing of members, whether in relation to other members, to the component societies, or to this Society. All questions of an ethical nature brought before the House of Delegates or the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or of a county society, upon which an appeal is taken from the decision of an individual Councillor.

Sec. 3. It shall make careful inquiry into the condition of the profession of each county in the state, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist and for organizing the profession in Counties where Societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse between physicians of the same locality and shall continue these efforts until every reputable physician of the state has been brought under the Society's influence.

Sec. 4. It shall, upon application, provide and issue charters to county societies organized in conformity with the spirit of this Constitution and By-Laws, and revoke such charters when deemed necessary.

Sec. 5. In sparsely settled sections it shall have the authority to organize the physicians of two or more counties into societies, to be designated by suitable names so as to distinguish them from district and other classes of Societies. These Societies when organized and chartered, shall be entitled to all the privileges and representation provided herein for county societies, until such counties may be organized separately.

Sec. 6. The Council shall direct and control the publication of the Journal.

Sec. 7. The Council shall approve the expenditure of the funds of the Society.

Sec. 8. The Council shall appoint the members of the Medico-Legal Committee and supervise the duties and work of that Committee.

Sec. 9. At such annual meeting the Councilors shall report to the House of Delegates on the Society work that has been carried on in their respective districts during the preceding year.

CHAPTER VIII.—STANDING COMMITTEES' DUTIES

Sec. 1. The Standing Committees of the Society shall be as follows:

(a) Committee on Legislation.
(b) Committee on Scientific Work.
(c) Committee on Public Health Education.
(d) Medico-Legal Committee.

Sec. 2. The Committee on Legislation shall consist of five members serving five years each, one new member to be appointed each year by the President. The first appointments under this section are to be made for one, two, three, four and five years respectively.

The Committee on Legislation shall utilize every organized influence of the profession in promoting such legislation concerning public health and scientific medicine as will be of greatest benefit to the public.

It shall work under the direction of the House of Delegates or of the Council when the House of Delegates is not in session.

No bill or proposed law or amendment thereto shall be introduced in the state legislature or sent to any member thereof in the name of this Society or by any of its committees until such proposed legislation shall have been indorsed and approved by the Council of this Society in regular session.

It shall submit an annual report with recommendations to the House of Delegates.

Sec. 3. Committee on Scientific Work:

This Committee shall consist of the President, Secretary and officers of constituted sections. It shall be the duty of this Committee to arrange the programs for the section meetings.

Section 4. Committee on Public Health Education:

This Committee on Public Health Education shall consist of five members serving five years each, one new member to be appointed each year by the President. The first appointments under this section are to be made for one, two, three, four and five years respectively.

It shall be the duty of this Committee to join with representatives from the Medical Department, University of Michigan, Detroit College of Medicine and Surgery, Michigan State Anti-Tuberculosis Association, Michigan Association Welfare League, State Department of Health, Michigan State Dental Society and Michigan State Nurses' Association, or any similar organizations for the purpose of carrying out an educational program to enlighten the public of Michigan in regard to scientific medicine.

Sec. 5. Medico-Legal Committee:

The Medico-Legal Committee shall consist of an executive board of five, to be elected by the Council, and also one member from each component society. Each component society shall elect its own representative on this committee. The executive board of the Medico-Legal Committee shall be composed of members elected for one, two, three, four and five years, respectively, and thereafter one member shall be elected each year to hold office for five years. All other members of the committee shall be elected for one year.

The members of the executive board of the Medico-Legal Committee shall be elected at the January meeting of the Council and shall immediately assume office. Members of the Medico-Legal Committee shall be elected, one by each component society participating in the defense fund, at the first meeting after September 1st and shall assume office January 1st following.

The Council at its January meeting shall elect one of the five members of the executive board of the Medico-Legal Committee as Chairman, whose term of office shall be for one year. He shall also act as chairman of the entire committee.

No disbursement shall be made from the Medico-Legal fund without the signatures of the Chairman of the Executive Board and the Chairman of the Council or the Secretary of the State Society.

The salary of the Chairman of the Medico-Legal Committee shall be fixed by the Council annually.

The executive board of the Medico-Legal Committee shall report to the Council at its Annual Meeting, giving full particulars of the work of the committee and a detailed statement of income and disbursements.

It shall engage by the year a competent firm as general attorneys and fix their compensation. Their duties shall be to compile from all available sources court decisions fixing the law of liability of physicians for civil malpractice, such compilations to be the property of the Society, and also to defend any member of the Society not in arrears, when sued or threatened with suit for civil malpractice, or to supervise such defense through a local attorney.

Members in arrears after April 1st shall not be entitled to defense for any suit, the cause of action of which arose while in arrears, and any member sued or threatened before joining the Society or before the organization of the Medicô-Legal fund must pay the actual cost of defense in such suit.

With the exception above noted, the Medico-Legal Committee shall undertake the defense of any member of the Society sued or threatened with suit for civil malpractice through all State and Federal Courts operating in Michigan, regardless of the time when the alleged cause for action arose and shall also defend any action for civil malpractice against the estate of a deceased member, provided he or she, while living, has conformed to the foregoing requirements.

In the event that during any one year the demands upon the Medico-Legal fund be large enough to exhaust it, the Council shall be authorized to loan sufficient funds from the Treasury of the Society to meet the contingency.

It shall be the duty of any member of the Society threatened with action for civil malpractice to confer at once with the member of the Medico-Legal Committee from his component Society and with his aid to prepare the case and forward the same to the chairman of the Executive Board. He must agree not to settle or compromise his case without the consent of the Executive Board and the general attorneys. He may recommend, in conjunction with the local member of the Medico-Legal Committee, the best available local attorney, but the authority to engage the services of local attorneys shall lie with the Executive Board and the general attorneys. The local attorney chosen shall enter the appearance of his client and undertake his defense under the supervision of the general attorneys.

All attorney's fees and costs will be paid from the Medico-Legal fund and defense carried through all federal and state courts operating in Michigan, but under no circumstances shall this fund be liable for any damages declared against an unsuccessful litigant.

CHAPTER IX.—EMERGENCY

Sec. 1. When prompt speech and action are imperative, authority to speak and act in the name of the Society is invested in the Council.

CHAPTER X.—ANNUAL DUES

Sec. 1. The annual dues shall be ten dollars for each member.

The Secretary of each county society shall collect and forward the same to the State Secretary.

Sec. 2. Members in arrears after April 1st of the official year shall be suspended and shall not participate in the benefits of the Society until reinstated.

CHAPTER XI.—COUNTY SOCIETIES

Sec. 1. All County Societies now in affiliation with the State Society or those which may hereafter be organized in this state, which have adopted principles of organization not in conflict with this Constitution and By-Laws or with the Principles of Medical Ethics of the American Medical Association, will upon application to the Council, receive a charter and become a component part of this Society, subject to the condition described in Section four of this chapter. A roster of its officers and members and the annual assessment and subscription to the Journal for each member must accompany the application.

Sec. 2. Only one component medical society shall be chartered in any county.

Sec. 3. Each county society shall be the judge of the qualifications of its own members; but, as such Societies are the only portals to this Society and to the American Medical Association, every reputable and legally registered practitioner of medicine shall be eligible to membership. He shall continue as a member, providing he complies with the provisions of the Constitutions and By-Laws of his county society and of this Society. In the event that his conduct, actions or professional labors reflect violation of said provisions, and in the event of failure on the part of his county society to exercise disciplinary action upon him, the Council, after due notice and hearing, may cause his expulsion. Before a charter is issued to any county society, full and ample notice and opportunity shall be given to every eligible physician in the county to become a member.

Sec. 4. Any physician who may feel aggrieved with the action of the society of his county in suspending or expelling him from membership shall have the right of appeal to the Councillor of his district, and lastly to the Council.

Sec. 5. In hearing appeals the Council or the Councillor may admit oral or written evidence as in their judgment will best and most fairly present facts. Efforts at conciliation and compromise shall, however, precede all hearings.

Sec. 6. When a member in good standing in a component society moves to another county in this state he shall be given without cost a transfer card good for the time for which his dues are paid, not exceeding one year from the first of January following the date of issue. This card shall be void if not accepted by a component society before such limit expires.

Sec. 7. A physician living near a county line may hold his membership in that county most convenient for him to attend, on permission of the Councilor in whose jurisdiction he resides.

Sec. 8. Each county society shall have general direction of the affairs of the profession in the county, and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician in the county; and systematic efforts shall be made by each member and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

Sec. 9. At the annual meeting, due notice having been given, each county society shall elect annually a delegate and alternate delegate to represent it in the House of Delegates of this Society. The Secretary of the county society shall immediately send the list of its delegates to the Secretary of this Society.

Sec. 10. The Secretary of each county society shall keep a roster of its members, and a list of the non-affiliated physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this state and such other information as may be deemed necessary, upon blanks supplied him for the purpose, together with remittance for such collections, to the state secretary.

CHAPTER XII

These By-Laws may be amended by majority vote of the delegates present, after the amendment has laid on the table one day. These By-Laws become effective immediately upon adoption.

The Journal
OF THE
Michigan State Medical Society
ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

PUBLICATION COMMITTEE
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C. D. Darling.....Ann Arbor
J. D. Bruce.....Saginaw

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Grand Rapids, Michigan

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NOVEMBER, 1924

Report Malpractice Threats Immediately to Doctor F. B. Tibbals, 1212 Kresge Building, Detroit, Michigan.

Editorials

OUR PRESIDENT'S MESSAGE

The Michigan State Medical Society has entered upon another year of history making in its honorable career and, perhaps, a foreword concerning the immediate future may be acceptable to the members. In order that we may better serve the Society, a working knowledge of the past and present would appear to be helpful in the performance of our task.

There are problems of vital interest to the public and the profession before us for solution and ours is the responsibility in taking the initiative. With this thought in mind, I shall try to briefly outline some of these matters and then commend them to your kindly consideration. May I respectfully suggest, if you find them worth while, that you discuss them in your County Society meetings.

Ours is not a closely knit organization, is only mildly cohesive, and does not function to capacity. Instance the fact of the large number of eligibles outside its ranks, and in consequence delaying organization of the profession. Division of sentiment, in respect to fundamentals, good principles and high ideals, arrests both progress and development.

You will note that the revised Constitution and By-Laws, adopted at the recent meeting of the State Society, provided for an increase in the annual dues, this surplus to be used for purposes of development. Heretofore, there has been insufficient funds to warrant extension of the Society's activities, which fact has proved a serious handicap.

The Michigan State Journal compares favorably with any published elsewhere, owing to its exceptional management, but it should be larger and better in the future, a front rank publication, and it will be, when funds are available.

It is planned to employ a full time Field Secretary, a competent man, to visit County Societies periodically, building up membership, create enthusiasm for professional unity and establish a closer relationship between state and county organizations. His work will be under the direction and control of the Council. Good results should follow, and in my opinion, they will justify the cost of such service.

Public Health Education has demonstrated its value and the campaign carried on by the Joint Committee should be continued. The number of persons reached during the past year was encouraging and fully warrants the State Medical Society in enlarging its contribution to meet the traveling expense of its lecturers.

True to tradition and professional altruism, the physicians of today are actively concerned with Public Health in its every phase. Humanity's appeal has been answered with sanitary science, bacteriology, preventive medicine and a host of helpful measures coming directly from scientific medicine and given freely to the world.

The foregoing touches but lightly the work being done and planned for this year's program, and as it appears to have merit and progress in its outlook, your cheerful co-operation is anticipated.

Permit me to call your attention to the commercial propaganda and practice indulged in by certain so-called Health Corporations that have invaded Michigan and flourish elsewhere. Physicians are employed, paid a small fee for the service rendered, and the corporation sells that service at an advance of several hundred per cent. The physician is buncoed. It is a vile business, meriting contempt, and should be ostracized by the profession.

Slowly, perhaps, but steadily, paternalism has been fastening a hold on many things, and the profession of medicine may not escape its baneful influence. Medically it bears the name of State Medicine, which, correctly interpreted, means Bureaucracy. Individual incentive and ambition perish under its hand. We are told it is a myth. Is it?

C. C. CLANCY.

INTRODUCING HARVEY GEORGE SMITH, EXECUTIVE SECRETARY.

Complying with the recorded wishes of our members as expressed at the Annual Meeting the Chairman of the Council and the Secretary-Editor promptly undertook to secure a man for the office of Executive Secretary of our Society.

It was determined that an Executive Secretary should possess qualities of education, organizational experience and ability, executive knowledge, capability of meeting men, a creditable speaker and of high personal integrity. We admit the exacting character of these qualifications, never-the-less quest was made for such an individual. Numerous possible candidates were interviewed. At times we were in despair of finding the desired individual. Eventually we were rewarded. The man was found and secured. We are pleased to introduce him to our members in the person of Harvey George Smith.

HARVEY GEORGE SMITH

That Mr. Smith can and will capably and efficiently serve our Society is in part attested to by the following qualifications possessed by him:

Born in Brandon, Wis., Feb. 22, 1886. Common and high school education. Bachelor of Science, University of Wisconsin, 1911. Agricultural agent, Michigan Agricultural College, organizer of Michigan Agriculturists. On State Hoover Commission during the war. 1919-1921—Siberia, Russia as Y. M. C. A. agent in educational work of boys and girls.

1922—Graduate work in Sociology and Economics at University of Chicago.

1923-1924—Bulgaria, educational work and vocational school for Russian refugees.

Recommended in unmistakable terms by men with whom he has worked and dealt. Commended for his execuutive, organizational and efficient abilities.

In addition to these, he has a personality that is pleasing. He has a clear-cut viewpoint of medical relations to the public that is constructive. He has an insight as to present and future needs and recognizes the problems that confront our organization and our members. In brief, the opinion is justified that we are fortunate in securing this type of a so well trained man as our Executive Secretary.

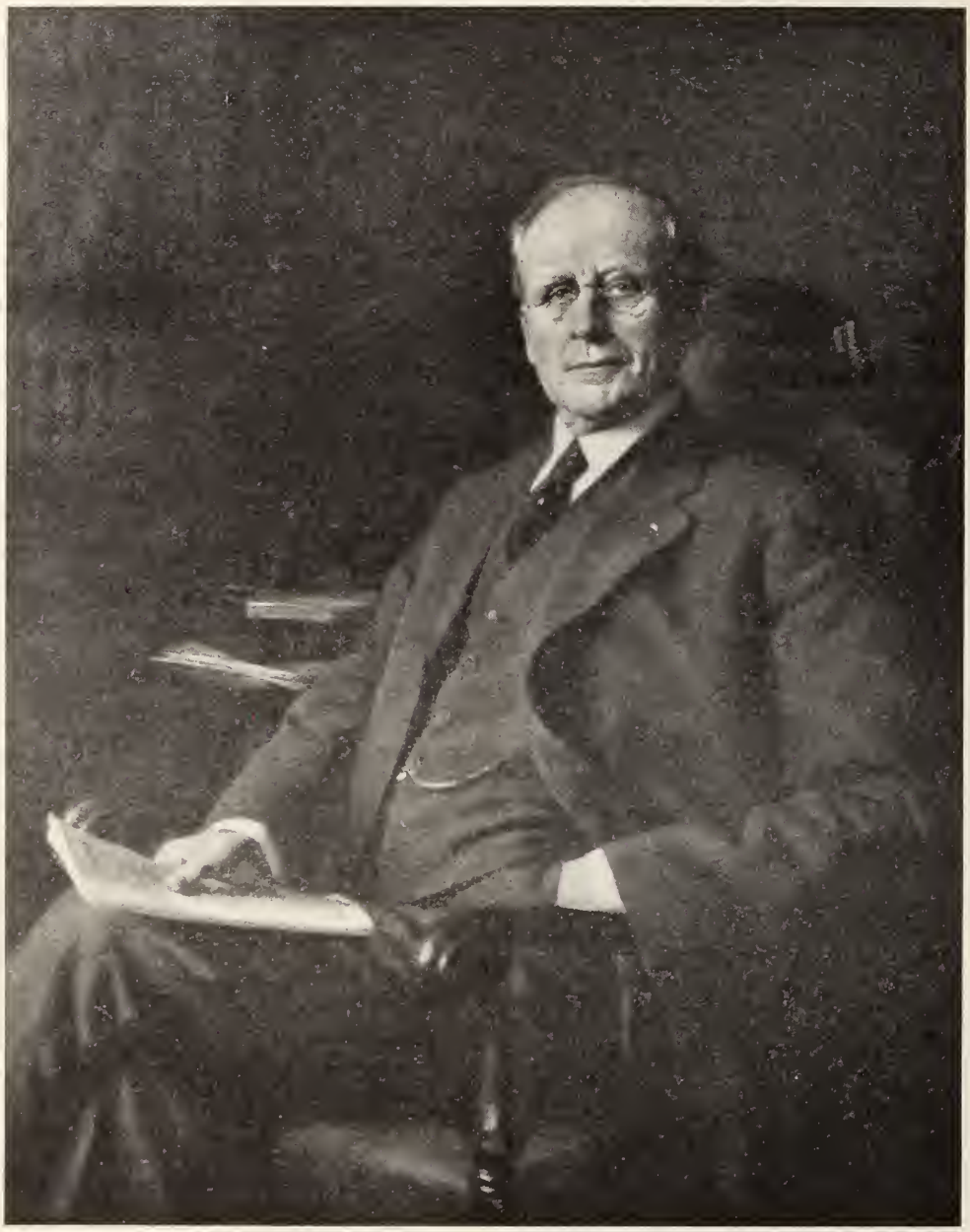
Mr. Smith will undertake his duties on November 1st. From then on you may expect to hear from him through the Journal and meet him as he mingles amongst us. We commend him to your cordial reception.

DR. GEORGE HENRY SIMMONS

On October 1st of this year, Dr. George Henry Simmons, editor of the Journal of the American Medical Association and general manager of the association, retired from office. His resignation, tendered one year ago, was reluctantly accepted by the Board of Trustees. This severance of official activity concluded twenty-five years of active service that was unselfishly contributed to the Association and to the medical profession, not alone of this country, but to the world. It extended over a period that witnessed wonderful and frequently changing epoch making events.

Many have known this man, but there are but few who know him as do those who have been privileged to be in close association with him. To outline in briefest details the actualities that he has inspired, developed, nurtured, applied and executed would be far beyond the bounds of any single editorial. They are so numerous and inclusive that one could readily extend them into a large volume, but there would be wanting the individual, humanness of the man that influenced the whole. We are certain, however, that in due time the writer will appear who will fittingly and in true detail record that which Dr. Simmons accomplished during his years of service.

It is, however, on behalf of the medical



DR. GEORGE HENRY SIMMONS

men of Michigan that we at this time record recognition to Dr. Simmons and his service that extended over this twenty-five-year period. By reason of it we have profited far more than has been realized. By his work, his thought, his ability we have realized and reaped more abundantly. By his concern, his interest, his foresight we have pursued our professional activities with fewer annoyances and greater contentment. By his sagaciousness we have materially profited and our position has been ennobled. We have been educated, led, guided, disciplined and commended by this man who for all time shall stand out in nobleness in the annals of medicine and organized medical activity. Our debt is great, our expression of appreciation can never liquidate it. We record in gratefulness and sincerity our thanks. We extend the hope and wish that the years will still be long before this man responds to the final summons. May the comforts of joy, contentment and physical well-being surround him. May the opportunity continue for frequent repetition of our appreciation for all that he has been and that which he accomplished for the men of medicine and the public.

During the first week in October Dr. Simmons departed for a leisure period of travel through Europe and India that will consume the time until spring. Though 70 years of age, he presents no infirmities. His associates and friends wish him well on this period of rest and pleasure that he has so well deserved.

A Statement to the Members of MICHIGAN STATE MEDICAL SOCIETY

Statement: During the past few years the realization has become more and more apparent that the purposes, functions and policies of our State Medical Society should be broadened and its scope of activity extended.

Passing events, civic progress and social changes have created a new order of affairs Times have changed and we must change with them. The individual doctor and organized medicine is confronted with new responsibilities. We must adapt ourselves to a changing public relationship. We must recognize the new and important role that confronts each practitioner of medicine. Failure to do so invites untoward and undesirable consequences.

Statement 2: The time has passed when organized medicine's only purpose is membership, County Society meetings at infrequent intervals, the publishing of the Journal and the providing of Medico-Legal Defense in malpractices cases. That limited scope of object and purpose is no longer sufficient, nor can we continue to justify it.

Statement 3. The new order makes it imperative that as a Society we should assume the following activities:

1. Memberships composed of all the reputable, licensed graduates and practitioners of medicine in the state.

2. To tender to such a membership:

(a) Component County Units that hold regular, profitable meetings where members may meet and mingle in mutually congenial and instructive environment.

(b) To provide at regular and convenient intervals, series of post-graduate medical instruction and clinical teaching that will be of value and assistance to doctors in their daily practice.

(c) To formulate plans of activity that will enable members individually and collectively to educate the public in regard to the truths of scientific medical principles and practices.

(d) To provide a renewed prestige and voice in the health and physical welfare of their respective communities.

(e) To elevate the standard and type of modern medical practice.

(f) To represent them in all public councils wherein the health of the public is considered, discussed and where there is legislation proposed for enactment.

(g) To enlarge and enhance the Journal and cause it to better meet the purposes for which it is published.

(h) To provide Medico-Legal protection in malpractice suits and preserve individual rights with freedom from persecution.

Statement 4: With our present income it is an absolute impossibility to conduct such a degree of organizational activity. Our funds are wholly inadequate for such purposes.

Statement 5: The House of Delegates, after due consideration and deliberation, amended our By-Laws at the Mount Clemens annual meeting. The amendment that was enacted increased the annual membership dues to ten dollars per year, effective January 1, 1925.

Statement 6: With this increase of annual income, your officers and the Council purpose instituting the following policies and plans:

1. To increase the size, scope and value of the Journal.

2. To provide for County Societies, scientific programs and clinical meetings conducted by trained and recognized teachers and clinicians.

3. To broaden the present plan of Public Health Education by increasing the number of public meetings wherein the public will be enlightened as to the truths of medicine.

4. To secure, as soon as possible, a full-time Executive Secretary who shall visit each component county society, assist it in its local progress and correlate its needs to the state program. It is planned that such an Executive Secretary shall devote as many days as possible to each county and that he shall also direct the business affairs of the State Society.

5. With the assistance of the American Medical Association it is purposed to conduct Councilor District Post-Graduate Courses of medical instruction for the personal benefit of every member.

6. To conserve legislative interests.

Statement 7: This plan of society work is impossible unless added funds are provided and such added funds will be provided by the increase in our annual dues to $10.00 per year. This is equivalent to *eighty-three cents per month.*

Request

With these statements, the Council advances the request that you join and support this program.

* * * *

1ST COUNCILOR DISTRICT

F. B. Walker, Councilor

The Councilors have each been requestetd to comment editorially on the increase in dues beginning January 1, 1925.

Those who have read the October number of the Journal must have seen the leading editorial bearing on this subject. Those who have not read it should do so. It gives an able, exhaustive and conclusive survey of the present work of the society, a prospective plan for other work not possible under the present rate of dues, and the benefits to be derived by any and all members.

Further comment by your Councilor would be superfluous. The increase is merely nominal, but is sufficient to do much. The twelve increased activi-

ties of the society, listed under Editorial Comments, must be carried on if our State Society shall do what it ought and that is now being done in several other states. We cannot afford to be dormant, or even to stand still, which would amount to the same thing.

I have always regarded our medical societies as beneficial to the individual member in proportion to his own activities.

2ND COUNCILOR DISTRICT

B. F. Green, Councilor

The action taken by the House of Delegates at the Mount Clemens meeting will certainly meet the approval of every member of the Michigan State Medical Society who will take the pains to study the urgent needs of the society and who recognizes the ever increasing responsibilities and duties of the medical profession.

The increase of the annual dues to $10.00 seems justified from every angle it may be viewed. The providing of means whereby a full time executive field secretary may be secured who will come into close personal touch with members of the various County Societies, and the sending of trained speakers and clinicians to hold meetings and conduct post-graduate clinics in every county or group of counties cannot fail to have a most striking effect upon the development and progress of most of our County Societies. Heretofore this has been impossible on account of the lack of funds. County officers have as a rule a difficult task and need all the help they can obtain from the parent State Society. Such help will result in a state-wide awakening and activity in all our County Societies.

Any possible loss of membership on account of the increase of dues will certainly be much more than compensated when the medical profession realizes that it is truly worth while to belong to an up-to-date, progressive and aggressive organization such as our State Society will become.

The Journal has always borne an undue share of the financial burden of conducting the affairs of the Society. The increase of dues will remedy this injustice and give it much greater scope and power in the future.

I am thoroughly in accord with the sentiments expressed in the editorial, "Why Increase Our Dues," in the October number of the Journal and commend it to the careful study of every member of the State Society. In my judgment the action of the House of Delegates in increasing the dues will bring about a new epoch of progress and advancement for the medical profession of Michigan.

4TH COUNCILOR DISTRICT

J. B. Jackson, Councilor

The House of Delegates unanimously voted to increase our society dues from $5.00 to $10.00. This vote represents the best judgment of the delegates elected by our body. In making this statement, there is no desire on the part of the Council to fail to assume its share of responsibility in bringing about this increase in dues. In its annual report to the House of Delegates the Council recommended the change. This recommendation to the House was passed by an unanimous vote of the Council. It is therefore apparent that the Council, as the executive body of our State Society, is in full accord with the House of Delegates in bringing about the increase in dues.

The reasons for this increase in dues has been very definitely stated in an editorial on the subject in the October Journal.

I should like to particularly emphasize one feature of the proposed program which seems to me to offer great opportunities. I refer to the plan of carrying on district clinics and lectures for the benefit of our component society members. The elevating of the standards of medical practice is the highest ideal which we may set before us. If, as members of our State Society, we can have brought to us a system of post-graduate instruction which will keep us informed on the progress of medical science and practice, we may expect that we shall be in a better position to render service to our patients. The best way to combat superstition and quackery is to make ourselves better qualified to care for our patients.

It is the hope of the Council that such a program of education may be made possible by the increase in dues.

It must be borne in mind that if this increase in dues is to result in an increase in our financial resources, we must have the combined support of our present membership. Every member who allows his membership to lapse will contribute to defeat the purpose which the House of Delegates had in mind when they voted as they did. Our representatives have decided on a plan. It is now up to the individual members to prove their loyalty to the Society and to the profession.

5TH COUNCILOR DISTRICT

B. R. Corbus, Councilor

When a man spends his money, he spends it with at least the hope of getting something in return—he spends the most cheerfully where there are good reasons to expect a good return. If you have any doubts as to whether an extra $5.00 investment in the Michigan State Medical Society is worth while, read the editorial, "Why Increase of Dues" in last month's Journal. Note that the Society has not been self-supporting, but that it has been dependent upon the Journal advertising to make up an annual deficit. The Council has for some time been much concerned about this. In fairness to its subscribers the profits of the Journal should go to make a better Journal. It is a situation which has its serious side—since the solvency of the Society is quite too much dependent upon the ability and industry of the Journal management.

Moreover, we are left with absolutely no surplus for such educational activities as this Society must undertake to properly justify its existence as something more than a selfish organization. Definite educational responsibilities are ours. It is to the public interest and to our interest that we accept these responsibilities and meet them efficiently.

As Chairman of the County Societies Committee I am especially interested, for this increase helps to make possible the plan of the House of Delegates and the Council to bring post-graduate days to the doctors in the more remote communities. Here the newly employed Executive Secretary will be of greatest help and here many of you will see promptly and definitely the dividends on your investment.

Through this increase of dues the Society will find it possible to broaden to its field—increase its usefulness and we hope may efficiently watch its opportunities.

6TH COUNCILOR DISTRICT

H. E. Randall, Councilor.

I belong to a number of societies or organizations outside of medical and every one of them cost me more a year than has my membership in the state and county medical societies. Some of the lay organizations send me an annual notice of election and dues and that is about all I get out of it some years. But the medical organization which does the most for me is the one for which I have paid the least. I am really surprised that the cost has been kept so low, but it has been done only by contribution of

generous giving of time and expenses by individual members.

The medical profession today requires, if it is to retain its honored position in society, still better organization and increased interest in medical diagnosis and progress. A medical university extension course must be available to all practitioners in our state. The incentive to study and to do better work must be met by our medical organization.

Pernicious legislation affecting the public in the care of the sick must be met by educating the legislators and public as to the folly and poorly prepared graduates of the various cults to masquerade before the public as competent to care for any sick person.

Threatened suits for malpractice have run about the same proportion for years, but may at any time assume a great increase. To Dr. Frank Tibbals the profession owes a lasting debt, for he has had charge of this work for a mere pittance.

Our annual dues now will give us a State Medical Journal second to none, admittance to annual Scientific sessions and any county meetings, make men medical acquaintances, give medico legal service and bring the new knowledge of diagnosis and treatment to the very door of every practitioner in Michigan and also allow us a Field Secretary on full time who will visit each community, iron out misunderstandings and promote the welfare of the medical profession.

All these things work for a bigger and better medical profession of Michigan.

7TH COUNCILOR DISTRICT

A. J. MacKenzie, Councilor

The increase of state dues to ten dollars, I believe, is necessary for the following reasons: First, the cost of paper and printing has greatly increased. Medical and surgical books that used to cost $6 a volume now cost $9 and $10. Second, it will make for a better Journal. Third, the most important advantage will be the employment of a Field Secretary, who, by visiting the various County Societies and becoming acquainted with the needs of same, will promote better feeling of harmony and understanding with the state society and indirectly will greatly increase its membership.

8TH COUNCILOR DISTRICT

J. D. Bruce, Councilor

I always think with the greatest sympathy of the doctor practicing in a remote location and denied association with his brother practitioners. At that, he is not so unfortunate as the man who, with the opportunity at hand, neglects to exchange experiences with his neighbors, for the former will probably find a measure of solace and profit in his books, while the latter will as surely neglect this opportunity.

The young man entering upon his career is too often met by the established members of his profession as a rival, rather than a colleague, and gets off to a bad start and it is quite by accident, after years of unpleasant and unprofitable isolation, if he finds his rightful place, aided and aiding, in the onward march of his time and community.

The logical place for a happy beginning is in the local and state medical societies, the out-patient departments of hospitals, and in one or other of the many social organizations with medical affiliations. As comparatively few of the last, and fewer still of the second are found outside the larger centers of population, obviously the local medical society must be the fold in which the recent graduates must find their protection, their guidance, and their inspiration.

In the constitution just adopted the purposes of our organization are stated as follows: "The objects of this association are to promote the science and art of medicine and the betterment of public health." (Article 11.)

In a recent speech I heard the term "civilization" characterized as "the art of living together." Does not this seem an excellent definition, not only in its exact interpretation, but also in its implication of the utilizing of one another's efforts and output for the good of all. The position of McLeod has always been secure, but without the turn Banting and Best gave to material already developed, the world might have gone on for generations without the boon of insulin. And, indeed, in a less conspicuous way, will minor benefits be lost to innumerable individuals if men secure in their practices, fail to recognize and provide for the needs of the younger and less fortunately placed.

Our educational institutions are of high order and the work of our individual practitioners compares favorably with that of any other state or county, but in both state and county societies cohesion and active co-operation for the common good have been conspicuous by their absence, our membership presenting a united front only in time of crisis.

The program determined upon at the Mount Clemens meeting, and so well summarized in the October Journal, is by no means a too ambitious one and should, and will, I'm sure, receive the endorsement of every member of the society, and, instead of the proposed small increase in dues causing a falling off in membership, we will, I believe, find an appreciable increase.

Never has the future of the "science and art of medicine" in Michigan seemed brighter nor "the betterment of public health" more sincerely and adequately planned for.

9TH COUNCILOR DISTRICT

O. L. Ricker, Councilor

As councilor I necessarily am interested in the affairs of the Michigan State Medical Society. I have been affiliated with this organization for the past twenty years. I have missed very few meetings . I watch with a great deal of interest the progress of this society. I have also appreciated very highly the benefits which are derived from being a member of this society.

With all that has been said relative to the increase in dues, I do not feel justified in adding very much to the same. I am very much in favor of the increase because I can see through the same that all physicians are deriving a great deal of benefit from the same. We have only to sit down and spend a few minutes reading the Journal of the Society until we are convinced that there is something being done to protect the welfare of every physician in the state.

I was very much pleased with the reports from the different committees which was published in the program of the State Society and also published in the minutes of the last edition of the Journal. We have only to read these reports to notice the progress which is being made along the line of scientific medication.

Michigan can be proud of the fact that she has such earnest workers along the line of public health and scientific advancements in medicine and surgery. The work of the Michigan State Medical Association for the past years is well deserving of the highest compliments, and through the earnest efforts of all physicians we can continue to progress as we have in the past.

In conclusion, I simply wish to say that it is up to the individual doctor and their local medical society to make good and show the other members of the profession who have so earnestly worked in all their efforts to make the individual and his local society a part of the great organization. We are proud of the fact that we are so closely affiliated with the national

organization and our association with this organization can only give us a better state medical society and through the state society, better physicians and thus the public are deriving better service.

I hope that every physician in Michigan will consider the advantages he is deriving from this organization before he in any way criticises the action of the House of Delegates in raising the dues.

Last, but not least, let us not forget that the Michigan State Medical Society is the first organization which every physician should direct his efforts to cooperate with as he feels the obligation which is upon him as a medical man. It is self-evident that physicians are very active in the local communities in which they are practicing. They carry many of the burdens of the community and contribute to the financial support of organizations very freely, which is without question of doubt one of the finest tributes to a physician, and yet I plead with each and every one of you not to forget your obligation to yourselves, your county society and your state association, and if you have carried out this obligation you will want to further the same by affiliating with the national organization and thus making your influence felt in all lines of medical work.

10TH COUNCILOR DISTRICT

Fred S. Baird, Councilor

Before attending the meeting in Mount Clemens, I was frankly opposed to an increase in dues to $10.00. In fact, I was instructed by my constituents to disapprove of the amount and to urge the adoption of $7.00, as was recommended by the Council at the mid-winter meeting.

However, on hearing the reasons for this change, I could not help but feel that my district would approve of my action in heartily endorsing this change, and on looking over the roster of this district, I do not see that we will lose any members as a result of the increase in dues.

We are planning on an educational campaign. We want the public to learn the truths of modern medicine. It is, I think, generally known even among medical men themselves that the public in instances maintains a hostile attitude towards us. They do not believe us any more as in days gone by. They have the impression that although medicine has made wonderful strides in the past 25 years we are not accomplishing what we should—in a word, that we are not giving service. This is, of course, not strictly true, but—it is their attitude.

Again, at this coming legislature the medical profession will be confronted with much legislative activity. The chiropractors have made an assessment, so I have been given to understand, of $50 per capita for a legislative fund. There will be considerable pernicious legislation next spring, unfavorable to medicine and disastrous to the public unless we educate the legislators and the public.

It is also planned to secure a full time Executive Secretary. His value will be very great and we can be in a position of bettering ourselves as a Society and more particularly, and what is of the greatest importance—our relations with the public, which have so sadly changed in the past few years. In this connection I wish to digress for a moment to call attention to the report of the committee on Civic and Industrial Relations at the last meeting. This report, in my opinion, is the best contribution to present day abuses in medical practice that I have seen anywhere. I commend its careful reading by all members.

All of the above costs money. We can accomplish nothing of any value with small yearly dues. To belong to this society is worth while and surely if a society is worth while, it ought to be worth $10.00 a year. No other club or society membership is purchased so cheaply and no other society is so important to our economic and professional well-being. I endorse the increase and know that the members of the society in the vast majority are also in favor of the increase.

11TH COUNCILOR DISTRICT

G. L. LeFevre, Councilor

There appears to be a great deal of controversy over the recent amendment to our constitution relative to an increase in the annual dues. I want to state just why I think this movement a good one.

The Michigan State Medical Society has been in existence for some sixty years and as long as I can remember the dues have been five dollars a year. During the early years of its life that sum was sufficient to meet its needs. But times are changing. The medical profession has changed, and is advancing swiftly. This necessitates that our organization advance, that it open up new fields of endeavor, that it grow in order to help its members grow. There are many things to be done that must be done to keep apace with other organizations of its kind. These things cannot be done without the expenditure of money. A glance at the annual report of the treasurer or a review of the editorial in the October issue of the Journal will show you that the present dues are hardly sufficient to meet the every day needs of the organization, leaving nothing for expansion.

We cannot give too much importance to the Medico-Legal department of our organization. Every year there are a goodly lot of our members hauled into court on false charges, by persons whose scruples are nothing to brag about. These charges have to be fought, to keep the name of the medical profession clean. It is true that the majority of the charges have no foundation, which is all the more reason for fighting them. These fights cost money. But where in this country can you get good medico-legal protection for ten dollars a year? This department alone is worth all your dues.

The medical profession is fast falling into disrepute in many communities. This is due solely to a lack of knowledge on the part of the laity on modern medicine. So the elevation of the medical profession depends on the ability of our society to function. Somebody has to give up their time to the work of educating the public along these lines. Public talks have to be arranged and made. And it is the duty of our society to do it. But this again will take money.

There are many enemies of modern medicine always ready to stab it in the back. These enemies choose various methods of attack, but one of the most frequently used is the pseudo-medical cult. These cults are ever ready to start legislation that will enable them to work with more freedom, and someone has to acquaint the legislators with the correct information. In the past many of our more public-spirited members have paid their own expenses to Lansing for this purpose. It is not fair that they should, since it is in the interests of all of us that they go. This increase in dues will allow the society to fight this anti-medical legislation in a more efficient manner.

With the advance in medicine comes the necessity of medical legislation which is intended to promote the health of the people. This legislation cannot be brought about without a great deal of work on the part of our society because it originates either in our society or is referred to it for advice. These things all tend to raise the profession in the public eye. And we must do all we can to help it.

There has been for a long time a need for a field secretary in our society, whose duty it is to bring the county societies into more close connection with the state organization, and to connect the country practitioner with his city brother. This is a full time

position and must be paid a salary sufficient to obtain a good man. As time goes on you will realize more fully the value of such an undertaking and this increase in dues will make it possible.

And lastly, let us consider the status of our Journal. In the past it has been making money, but this surplus has had to be used to pay the current expenses of the society. An increase in dues will enable the Journal to use its profits for its own expansion, so that we will get a bigger and better Journal. It is the Journal that will make or break our society. Without it we cannot improve. This added money will make it possible to have more original articles and devote more space to material that will improve our society.

The value of a society to a member is no more than he puts into it. The more you work for the organization the more will you get out of it. The organization cannot live without funds and this little added revenue will enable the society to rebuild itself and become the backbone of the profession in the state.

12TH COUNCILOR DISTRICT

Richard Burke, Councilor

The Michigan State Medical Society was organized one hundred and four years ago by those early pioneers who even then felt the need of organization.

Today, as at no other time in its history, the Medical Society of Michigan has a definite duty to perform, not only to itself, but to the general public as well. The leaders and healers of the various cults are at present most outspoken and enjoying the most flourishing period of their existence. Not all the attacks upon organized medecine originate from without. We have within our membership those who, ever seeking self advancement, are willing and anxious to sell out to those who are willing to exploit the practice of medicine, but happily for the profession, those so inclined are in the small minority. The great body of the medical profession are loyal to the precepts of those early founders of the society and recognize the fact that today as never before in the history of the society, there exists a need not only of organization, but of education of the public of the aims of the medical profession.

Every physician in the Upper Peninsula of Michigan realizes that it is necessary to increase the dues of the society if it intends to carry out a program which the Editor, Dr. Warnshuis, has so ably outlined in the October issue of the Journal, and I feel confident that I voice the sentiments of the doctors of the 12th District when I say "That they not only endorse this increase in the dues, but that they take pleasure and pride in the fact that they are keeping the Michigan State Medical Society in the front ranks of the great societies of the nation."

13TH COUNCILOR DISTRICT

B. H. Van Leuvan, Councilor

At first I was not in favor of an increase in dues because the average doctor thinks he does not get much out of his membership in the State Society. Perhaps he is right in thinking so. He is willing to pay five dollars to say he belongs, and let it go at that.

In the past not much was done for him by the Society, except that he received the Journal each month and was kept more or less in touch with the proceedings of the State Society. He could read the articles each month, some ultra scientific and some not so scientific, anyway he had access to the classified ads in the back of the Journal.

I have had men in this district make the above statement to me, and wonder just what the State Society was doing for them. The only reply one could make is, "What can you expect for five dollars."

In raising the dues to ten dollars the state body is going to have something to work with, and up here in the north country, we are watching with much interest, the legislative committee and the public educational committee, acting against the "quacks and chiros." We are glad to note their progress and if the extra five dollars means added protection to our profession, it is well worth it.

Please do not misconstrue my meaning. I am not criticising the State Medical Society in its relation to the general practitioner out away from medical centers. Am only wondering how it could do as much as it has with what it received, and I for one am for the increase, and hope that the legislative committee gets its share to carry on the work it has so ably started.

14TH COUNCILOR DISTRICT

C. D. Darling, Councilor

Why increase the dues of the Michigan State Medical Society? The answer in one word is PROGRESS. This word may have many definitions according to time and place, particularly when applied to medicine or future medical practice.

About 4,500 physicians are recorded as licensed to prace in Michigan; 2,900 of these are members of the Michigan State Medical Society. By the proper use of the money derived from increased dues, it is proposed to make the Medical Society so valuable that no one licensed to practice medicine can afford to be without its protecting influence.

The joint committee on Public Health Education has already started a program which will eventually carry medical education to the people. It will enter the primary schools demanding proper medical advice in the moral and physical development of children. It will insist that every person living in the state or coming to reside in the state shall have a complete health examination.

Real education is on the way and your State Medical Society proposes to prepare the doctors and the public for enjoying the benefits by bringing them together in clinics. These clinics will be held from time to time in selected places throughout the state, according to plans which will be presented in the Journal as soon as they have been developed.

All the spare time of every physician will be required to carry out such a program. He must have a general knowledge of sanitation and the communicable diseases. He must know the last word in physical diagnosis. Personally, I would not care for a special society of diagnostitians for which many general practitioners could qualify and some specialists could not. It would be much better to have every registered physician attain the accomplishment of general diagnosis.

As a profession we have much work to do if we would save our faces. Education of the public is pushing us so hard that we must pay our dues and work together. The physician who inststs on keeping outside will find himself riding in a buggy more or less alone down a finely paved road, for education is paving the way.

OPERATIVE OBSTETRICS

During pregnancy and labor the obstetrician's duty to his patient is both prophylactic and remedial. After adequate care of his patient as to hygiene and conduct during pregnancy, his course is one of watchful waiting. He studies the progress of his

case and decides when, where and how he may be of assistance. He must remember, however, that he can be of no assistance unless something in the course of pregnancy, labor or puerperium goes wrong. That something which demands interference or any mode of treatment is called an indication. All indications for interference lie in immediate or prospective danger to mother or child.

The features associated with each obstetrical case are the factors which determine the nature of procedure to be instituted. These features we characterize as the conditions of the case and are found in the state of the mother at the time of the intended treatment.

It is not my intention to take up all operative procedures of obstetrics, but to confine myself to a short discussion of the indications for and conditions associated with the common examples of operative obstetrics with which we come in contact, namely, forceps delivery, version and extraction and Caesarian section.

De Lee says: "The forceps of obstetrics is an instrument designed to extract the foetus by the head from the maternal passages without injury to it or to the mother. As soon as the right of either is encroached upon, the instrument ceases to be the forceps of obstetrics, but becomes simply an instrument of extraction similar to the craniotomy forceps, but not so good." The function of the forceps is simply one of traction, not a rotator in strict sense of the word. Any attempt at rotation must be accompanied by traction, not a lever; backward and forward motions are not permissible.

The indications for forceps are the same as for extraction in general, comprising those conditions which threaten the life of the mother or child.

In America, 75 per cent of forceps are done because of arrest of labor with head on perineum, due to insufficiency of pains. Episiotomy may obviate application of forceps many times when due to resistant perineum. (2) Arrest of rotation of head is another frequent indication for forceps and occurs in occiput posterior positions most frequently with arrest of occiput usually in the deep transverse.

Third are a group of conditions affecting the mother primarily and child secondarily, such as acute disease, chronic disease, infections, placenta praevia, separation of placenta and prolapse of cord.

One absolute contraindication to use the forceps is the contracted pelvis. The following conditions must be present to make the application of forceps safe:

(1) Pelvis must be large enough to permit the delivery of unmutilated child.

(2) The cervix must be completely dilated or effaced. (3) Membranes must be ruptured. (4) Head must be engaged or ready to engage. (5) Child must be living.

The question of choice between forceps and version. Failure with forceps does not preclude version, while version half completed must be finished at any cost. When the head is above the brim and cannot be made to engage, version is the safer procedure. This also holds good with mal-presentations at the pelvic brim.

In cases of prematurity forceps are preferred because of ease of delivery and freedom from the necessary rough handling associated with version. In cases of primipara, other things being equal, forceps delivery is to be preferred as being less likely to result in severe lacerations of soft parts with the forceps. The advance may be intermittent and gradual, but in version the after-coming head must be delivered rapidly if we are to save the child. In a general way the forceps operation is safer for the child than version. Even in an easy version the unavoidable handling of the cord, and the admission of air into the uterus may result in premature foetal inspirations with resulting asphyxia.

Version should not be undertaken when there is any considerable narrowing of the transverse diameter of the pelvic brim, since the long axis of the head is thus brought into coincidence with the shortest transverse diameter of the pelvis. There should be no direct mortality in forceps operation.

In a general way it may be said that version with extraction is indicated in all cases in which speedy delivery is necessary, and in which such delivery cannot without undue risk be accomplished by forceps.

Version is contra-indicated when forceps delivery is practicable and not attended by great risk to mother.

Version is contra-indicated in hydrocephalus or dead foetus unless the removal of the dead foetus promises to be easy.

Version is contra-indicated after rupture of membranes when the uterus is tightly contracted around the foetus and does not relax under general anesthesia.

Last, but not by any means least, we have to consider the operation of Caesarian section. The indications for Caesarian section may be either absolute or relative. If the true conjugate is less than five and one-half to six cm. it is mechanically impossible to remove a foetus of normal size. The dismemberment operation in this case would take a long time and be far more dangerous to the patient than Caesarian section. Irre-

movable tumor or obstruction blocking the canal also precludes delivery by the vaginal route. These two conditions constitute absolute indications for the operation of Caesarian section.

There are a large group of cases classified as relative indications in which it is difficult to tell in advance whether the Caesarian section is really necessary. These are the cases in which some other method of delivery is mechanically possible. Cases in which the true conjugate is greater than 5½ to 6 cm. and less than 9 cm., these are the so-called border line cases and their proper treatment constitutes probably the most difficult problem in obstetrics. The nearer the lower limit is approached, the more the Caesarian section comes into consideration and should displace symphysiotomy, always more or less experimental.

There has been of late years a disposition to extend widely the indications for Caesarean section and to operate in eclampsia, placenta praevia, prolapse of the cord and other conditions in which formerly it was not considered.

Caesarean section should not be considered if the child is dead or non-viable or monstrosity or mal-formation unless the true conjugate is below 5½ cm. Especial care must be taken that the child is not premature at the time of operation.

Paul S. Miller.

COMMITTEES FOR 1925

President Clancy has appointed the following Standing Committees for the coming year. It is requested that this official announcement be accepted as official individual notification to those comprising the personnel of these committees.

The duties of each committee is outlined in our By-Laws, published in this issue. It is our President's urgent request that chairman and individual committeemen familiarize themselves with these duties. These appointments are not political rewards. It is a call to service and duty. It is a drafting of men who are expected to carry on organizational work. It is our President's desire that energetic work be immediately undertaken.

STANDING COMMITTEES

PUBLIC HEALTH

W. J. O'Rielly, Saginaw.
C. S. Gorsline, Battle Creek.
R. C. Mahaney, Owosso.
W. J. Kay, Lapeer.
Frank A. Kelly, Detroit.

LEGISLATION AND PUBLIC POLICY

James B. Bradley, Eaton Rapids.
J. B. Kennedy, Detroit.
W. H. Marshall, Flint.
D. E. Welsh, Grand Rapids.
B. M. Davis, Lansing.

TUBERCULOSIS

C. G. Jennings, Detroit.
B. A. Shephard, Kalamazoo.
W. N. Nesbit, Grand Rapids.
H. M. Rich, Detroit.
D. A. Coates, Okomas.

VENEREAL PROPHYLAXIS

U. J. Wile, Ann Arbor.
H. W. Plaggemeyer, Detroit.
L. J. Hirschman, Detroit.

MEDICAL EDUCATION

A. P. Biddle, Detroit.
Hugh Cabot, Ann Arbor.
W. H. McCracken, Detroit.

CIVIC AND INDUSTRIAL RELATIONS

T .F. Heavenrich, Port Huron.
Colin D. Monroe, Jackson.
H. S. Collisi, Grand Rapids.
R. L. Clark, Detroit.
H. M. Joy, Calumet.
F. G. Swartz, Traverse City.
R. H. Nichols, Holland.
W. D. Bleyker, Kalamazoo.
R. A. Dibble, Detroit.

JOINT COMMITTEE ON PUBLIC HEALTH EDUCATION

Angus McClean, Detroit.
W. T. Dodge, Big Rapids.
J. B. Jackson, Kalamazoo.
F. C. Warnshuis, Grand Rapids.
B. D. Harrison, Detroit.

CONSTITUTION AND BY-LAWS

In this issue there will be found the revised Constitution and By-Laws of our State Society. It became effective at our Mount Clemens meeting and contains all the amendments.

We urge that each member familiarize himself with all it's provisions. You are requested to preserve this issue of the Journal so that when occasions arise you can refer to it.

We are of the opinion that we have a broad, democratic plan of organization and activity. Under these principles our state profession can exercise a full degree of activity that will enhance the Society's scope of usefulness. We recommend that you enlist anew to assist in acquiting ourselves of the responsibilities imposed.

Editorial Comments

The Carnegie Foundation for the Advancement of Teaching, in a report on legal education in the United States, offers some interesting statistics based on the census returns of 1920 concerning the supply of physicians, clergymen and lawyers in the United States. According to the census reports, in 1920 there were 164,781 physicians, 168,348 clergymen and 132,590 lawyers. Incidentally, the figures for physicians included 14,774 nondescript healers and 5,030 osteo-

paths; the figures for clergymen included 14,078 religious and charity workers, and the figures for lawyers included 10,071 judges, justices, magistrates, abstracters, notaries and justices of the peace. An analysis of the figures in comparison with those of preceding decades shows a 4.3 per cent increase in physicians; 25.6 per cent increase in clergymen, and 8.5 per cent increase in lawyers. There has been a progressive decline in the numbers of all three professions in proportion to the population since 1880, most marked in the case of physicians, who, during the last decade, increased in number less than one-third as fast as the population in spite of the fact that healers and osteopaths are included. Clergymen have increased substantially, and in 1920, for the first time, clergymen outnumbered even physicians.

During the decade ending in 1910, medical education in the United States reached the crest of the wave; the number of medical colleges then exceeded the number in all other countries combined, and they were turning out annually an unusually large number of physicians. Although the total number of physicians is still slightly on the increase, it is not increasing proportionately with the growth of population. During the period ending in 1920, the reorganization of medical education through the reduction in the number of colleges and the adoption of higher educational standards took place. A reduction in the annual output, therefore, was expected, and it would not have been surprising had the total number of physicians been actually decreased. The lowest point of the wave, however, was passed in 1922, and the output of physicians is again increasing . By 1930, the census returns will doubtless reveal a different picture.

If the number of physicians should not increase proportionately with the needs of the population during the present decade and if, in addition to the apparent local shortage, there should be also a general shortage, the problem of how to meet the situation will become the major question in medical education. It is not at all certain that a greater number of men can be induced to enter the practice of medicine by shortening the curriculum or by lowering the cost of medical education. Neither has it ever been established that an increase in the number of physicians will cause any considerable migration of physicians from the cities to the country districts in which a shortage exists. Nor has it been established that medical education can be appreciably improved by eliminating certain subjects from the curriculum or by shortening the time devoted to other subjects. The problem is intricate and complex. Its decision will rest not only with leaders in medicine; with the deans of medical colleges and their official organizations; with the Council on Medical Education and Hospitals of the American Medical Association; with the Carnegie and Rockefeller foundations and the state boards of registration, but also with the mass action of the public.

AMERICAN MEDICAL ASSOCIATION

1. It is a federacy of state medical organizations.

2. It is the national organization of the graduates in medicine.

3. It concerns itself with national problems. These problems in the final analysis affect the individual doctor. Therefore this national association concerns itself with your personal interests and welfare. It also unifies your relationship and professional life with those of your fellow conferers throughout the country.

4. It safeguards you in legislative, business and educational circles.

5. It provides a national publication, the Journal of the American Medical Association, published weekly, and serving as a post-graduate training and correspondence teacher.

6. To become a Fellow of the A. M. A., should be the desire of every doctor. To do so you must file an application. To secure such an application, write to Dr. Olin West, Secretary, 535 N. Dearborn St., Chicago, Ill.

The House of Delegates and the Council urge that you apply today for Fellowship in the American Medical Association. You owe this support to your National Association. Will you contribute it? Apply now and help solve the problems that confront us nationally.

TEN WAYS TO KILL A MEDICAL SOCIETY

Don't go to the meetings.

If you do go, go late.

If the weather doesn't suit you, don't think of going.

If you do attend a meeting, find fault with the work of the officers and members.

Never accept office, as it is easier to criticize than to do things.

Get sore if you are not appointed on committees, but if you are, do not attend committee meetings.

If asked by the chairman to give your opinion on some matter, tell him you have nothing to say. After the meeting tell everyone how things should be done.

Do nothing more than absolutely necessary, but when members use their ability to help matters along, howl that the institution is run by a clique.

Hold back your dues, or don't pay at all.

Don't bother about getting new members. "Let George do it."—*Pittsburgh Medical Journal.*

An editor's experience would be very depressing were he to be ever influenced by the opinions that were expressed to him whenever his comments seemed, or actually did pinch the toes of an erring one. The A. M. A. went on record as to advertising and the advertising policies of hospitals, clinics and individuals. In our October issue we published an editorial comment upon that policy and urged it's enforcement by County Societies. That issue brought seven "kicks" from parties who accused us of directly attacking them and their clinic or hospital. When written, we had no one clinic, hospital or individual in mind. So all we can say is that if the shoe fit, we assume no blame for the pinches. When the indication arises to expose or criticise a single individual or group we have the nerve and frankness to mention specific names or incidents. When our comments are general they are directed to general policies and are not to be construed as individual criticism or the singling out of any one specific purpose, clinic, doctor, group or locality. Michigan is a big state.

The newspaper and magazine editor has never been able to perceive why an individual doctor should not indulge in paid personal advertising. We do not propose advancing the basis of the argument. We do reiterate that the profession, as a whole, might well employ space for educational advertising of the truths and principles of scientific medicine. It need not enter into any argumentative controversy. It need not point out the groundless theories of cults and their kind. It should simply acquaint the public with truths and facts and back these up by open sponsorship of their reliability. The sponsor should be the local, district or state medical society. Such a policy is consistent and warranted. We are pleased to note that the Texas State Medical Association has undertaken such an advertising campaign. We shall watch with eager concern this innovation.

Recognition was accorded to the Macomb County Medical Society for their care, thoughtfulness and

effort expended toward making the arrangements for our Annual Meeting in Mount Clemens. We feel now that the expense accounts have been closed that recognition and credit should be given to Dr. W. H. Norton of Mount Clemens for the time and labor he contributed as Chairman of the Committee on Exhibits. By reason of his personal diligence and management he has turned into our treasury the sum of $538.95, representing the net profit accrued. This is a splendid showing for which we tender Dr. Norton the Society's sincere appreciation.

Don't go to your County Meetings if—

1. You know everything already.
2. If you are impervious to new ideas when presented by others.
3. If you have reached the acme of excellence and efficiency.
4. If your ability cannot be improved.
5. If you can't see any benefit in discussing the other fellow's suggestion.
7. If you are too miserly to contribute some of your time to organized, co-operative effort.
8. If you have no use for your fellow-man.

On the other hand, if you want to be a part and an active supporter of your Society—then go to every meeting.

Turn to the October Journal and read again the report of our Committee on Civic and Industrial Relations. This report is not merely a jumble of words or an idle composition. It consists of the recommendations of nine fellow members who have given a year of thought to these problems and who have set forth an honest opinion and advanced some wholesome pertinent advice. You will do well to give heed to all that they recommend. We also urge that County Societies give serious thought to the problems cited and that local action considered. You owe this support to your Committee.

We believe we have plainly set forth the substantiating reasons why an increase in dues is necessary. We have also outlined in general plans for increased organizational activity. If any member is not in accord we earnestly request that he advance his objections. We want to know what objections there are. Don't keep quiet. Give us the benefit of your judgment, which will be received with every consideration and accorded every respect. We earnestly desire your co-operation and support.

We would like to enlarge our correspondence department. To do so we invite you to use it for personal comment upon medical, health and social economic problems. We solicit your interest and welcome an expression of your views and opinions. In so far as possible we will answer your queries and lend every assistance possible. We have no doubt but what we can be of help to you. Will you avail yourself of this opportunity.

Dr. W .A. Pusey, President of the A. M. A., has caused to be printed in a neat booklet his two recent addresses on the social problem of medicine. In them he presents some very timely and pertinent questions as to medical education, medical and nursing services and our relationship to the public. It is sincerely hoped that these comments of President Pusey may create an earnest movement that will solve the existing difficulties.

Every member as a citizen should permit nothing to prevent him from voting on election day. Whatever your preferences are, express them by your ballot. We do urge also that you exercise your vote to defeat the present proposed state income tax. It is class legislation and taxes your income and at the same time exempts those whose income is less than $4,000. Every sound thinking individual should do everything in his power to defeat this proposed tax plan.

The Rockefeller Foundation recognizes that there is a difference of opinion as to a nurse's training, and that present conditions are unsatisfactory. It concludes that the chief ideas are, to reduce the period of training, a new type of nurse and more bedside and public health nursing. The Foundation is making a survey of existing conditions and has made a contribution to Yale University for an experiment in the education of nurses.

"DOCTOR—JUST A MOMENT, PLEASE"—that is the heading of an advertisement contained in this issue. It ran in the October issue also with the result that a fair number of our members responded to the request. We are requesting that all of our members turn to that ad. this month and please respond to the request. May we have your assistance? We are in need of this co-operation. It costs you nothing to respond.

Well—are you now in accord with the plan advanced for our Society's new program of activity? This program is only possible because of added revenue. If you have any criticism or, if you desire added information, please write us. We want every member to be fully enlightened upon the entire plan.

In this issue we again impart other additional features that will ensue by reason of obtaining necessary funds from increased dues. It must be apparent that these benefits enhance your membership and bring returns of personal benefit.

Preserve this issue, for it contains our Constitution and By-Laws. You will want to refer to it from time to time.

Correspondence

The Editor of the Journal of the Michigan State Medical Society.

I am surprised reading political stuff in our medical journal. If there would be not enough room in our daily press like Free Press, News, Times, to discuss political matters about elections, mobilization day, etc.

I and the most of our profession do consider war as a traumatic epidemic, and we are supposed to fight this traumatic epidemic the same way as any other epidemics, i. e., by preventive measures. Any mobilization day, no matter in what country: United States or Japan or any other country, is always war, bearing the deathfull germs of this anti-human epidemic.

Your statement that "we" (it sounds like it would be all the members of the Michigan State Medical Society) are opposed to all the "bolshevick" of Bryan-LaFollette type who condemn and obstruct preparedness," is not right. Do you know that LaFollette in his campaign speeches attacks more bitterly the "bolshevicks" than Coolidge and that none of the "bolshevicks" do support LaFollette, and campaigning for their own candidate for President by the name, William Foster, who advocated for United States the "Soviet" rule? But anyhow, how it is you can not expect that we about 2,000 members all should be of the same political opinion. Some of us stand for Coolidge and his 100 per cent Americanism. Some

stand for Davis and his intention to introduce United States in the League of Nations. Some stand for LaFollette and his ideals of the year 1776, and may be horrible dictu, some of us do sympathize with the too terrible for you "bolshevicks." And this difference of our political opinions should not interfere with being all the same good members of our Society. I would suggest that our Journal should not bother with political items and leave politics to laity papers and magazines.

Fraternally yours,
M. A. Rirkin, M. D.
447 Farnsworth Ave., Detroit.

Doctor, the *"we"* is an editor's *"we"* and an editor'h privilege. *We* never liked it, but it's editing style and *we* presume *we* must observe it. *We* reiterate that WE are "100 per cent for Coolidge and his plans for national preparedness" just as WE are 100 per cent in favor of vaccination, toxin-antitoxin, typhoid prophylaxis, anti-tetanus serum, and every other preventative and prophylactic measure. Preparedness for war is recognized by competent authority as the greatest prophylactic measure to prevent war. Lastly, we are delighted in having awakened some interest. We trust that members will use this column more frequently for discussion of medical and economic problems. May we have 100 per cent interest. Somebody suggest a topic for discussion, but for the "love of Mike," don't start on the cults.

To the Editor of the Journal of the Michigan State Medical Society:

Harper Hospital announces a course in General Surgery for graduates and practicing physicians. It will begin November 3, 1924, and continue until November 29, 1924, inclusive.

The course will comprise general surgery and its immediate specialties. The clinics will be under the direction of the heads of the following departments: General Surgery, Proctology, Orthopedic Surgery, Genito-Urinary Surgery, X-Ray, Pathology, Anesthesia.

The entire morning will be devoted to intensive work in the operating rooms, wards and laboratories. Those students desiring further practical work will have the opportunity of utilizing any material in the afternoons.

The fee for the course will be $50.00, payable in advance. Applications for enrollment should be accompanied by check for $10.00.

The size of the class will be strictly limited. Further particulars will be gladly sent on request.

Very truly yours,
HARPER HOSPITAL,
Stewart Hamilton, M. D., Superintendent.

State News Notes

COLLECTIONS

Physicians' Bills and Hospital Accounts collected anywhere in Michigan. H. C. VanAken, Lawyer, 309 Post Building, Battle Creek, Michigan. Reference any Bank in Battle Creek.

NURSES' private home, invites convalescents and invalids; best of care, fine location. R. Rs. N. Y. C. and Interurban; best of references given. For particulars write Bessie Bileth, 566 Ely Street, Allegan, Mich.

Large Eye, Ear, Nose and Throat Clinic wants a man who wishes to take up refractions. Opportunity to learn Ear, Nose and Throat work in addition, if qualified.. Address Michigan State Medical Journal, Powers Theater Bldg., Grand Rapids Mich.

WANTED—To adopt a girl of age one to four years, by practicing physician. Customary information as to birth and health required. Any physician knowing of a desirable child, please communicate with—Adoption, c/o Journal.

Dr. William S. Gonne of Detroit was married on Wednesday, October 15th, to Miss Marion Morton.

Dr. James A. MacMillan was recently elected a member of the Detroit Athletic Club.

The executive committee of the Council held a meeting in Grand Rapids on Oct. 16th.

Dr. R. C. Stone, Battle Creek, was operated upon Oct. 9th for an acute gangrenous appendicitis.

Dr. Byron Monkman announces the removal of his office to 229 Farwell Bldg., Detroit.

Miss Mildred Repp, daughter of Dr. and Mrs. William A. Repp of Detroit, was married on October 16th to Dr. William R. Milner.

Dr. and Mrs. A. O. Brown are receiving felicitations on the birth of a son, Calvin Robert, born during the early part of October.

Dr. and Mrs. C. E. Weaver enjoyed a pleasant motor trip to Washington and other points in the east last month.

Dr. and Mrs. George Reberdy sailed the middle of last month for Europe, where they will spend the greater part of six months in Vienna.

Dr. R. J. Hutchinson, Grand Rapids, is making a pleasing recovery following his operation at Johns Hopkins Hospital, Baltimore.

Dr. G. H. Southwick, Grand Rapids, was admitted as a Fellow of the American College of Surgeons at the recent New York convocation.

Wayne County has increased its annual dues to $20.00 to meet the increased dues of the State Society. Kent County has increased its annual dues to $15.00 for the same reason.

Dr. Cornetta G. Moen announces the opening of her offices in Grand Rapids. Dr. Moen served as one of the internes in Butterworth Hospital during the past year.

Dr. John B. Youmans of the Department of Internal Medicine of the University of Michigan Medical School, has been made Assistant Professor of Medicine.

Dr. Allan Kanavel of Chicago, Professor of Surgery at Northwestern University Medical School, gave a very interesting address on "Trigeminal Neuralgia" before the Detroit Academy of Surgery on Thursday, October 9th.

Dr. L. M. Warfield, Professor of Medicine, University of Michigan, has been given a leave of absence until June 1st. In the interval, Dr. P. M. Hickey has been appointed as executive head of the Department of Internal Medicine.

Dean Hugh Cabot represented the University of Michigan at the dedication of the James Whitcomb Riley Memorial Hospital for Children in Indianapolis on October 7th. This is a teaching hospital attached to the University of Indiana Medical School.

Dean Hugh Cabot represented the University of Michigan on October 9th at the inauguration of President Vinson of Western Reserve University, and at the dedication of the new medical building of Western Reserve in Cleveland, Ohio.

Dr. Albert G. Young has been appointed instructor in the Department of Pharmacology of the University of Michigan Medical School. Dr. Young received his Ph.D. degree at the University of Wisconsin in Physiology and Pharmacology during the past year.

Practitioners' clinics, which were discontinued by the Department of Internal Medicine of the Medical School, U. of M., during the summer months will be held on the second Wednesday of each month, beginning with October.

Dr. A. D. Ruedemann of the Department of Ophthalmology of the University Medical School has resigned his appointment to accept a position as head of the Department of Ophthalmology in the Cleveland Clinic.

Doctors L. Byron Ashley, Wm. R. Clinton, Wyman D. Barrett, Ralph H. Bookmeyer, L. Irving Condit and John J. Corbett of Detroit, were recipients of the F. A. C. S. degree at the Clinical Congress of the American College of Surgeons meeting at Brooklyn during October.

Dr. Phil Marsh, Assistant Professor of Medicine of the University of Michigan Medical School, and Dr. Carl W. Eberbach, Assistant Professor of Surgery, recently talked to the combined Montcalm and Ionia County Medical Society on "The Medical and Surgical Kidney."

The following promotions have been made in the Department of Ophthalmology for the ensuing year: Dr. William H. Stokes, from Assistant Instructor to Instructor in Ophthalmology; Dr. Ralph O. Rychener, from interne to Assistant Instructor in Ophthalmology.

Dr. Norman F. Miller of the Department of Gynecology and Obstetrics of the University Medical School, read a paper on "Cranial and Inter-Cranial Birth Injuries" before the Genesee County Medical Society, September 17th. Dr. Miller is also conducting an investigation at the present time on "The Relation of Posture to Gynecological Conditions."

The Department of Internal Medicine of the University of Michigan has recently purchased a stethophone for the purpose of first-hand teaching of auscultation in the study of heart sounds. By the use of this instrument an entire class may listen to the heart sounds of a patient presented in clinic and the character of the sounds may be accurately observed.

The management of St. Joseph's Mercy Hospital of Ann Arbor has acquired a tract of eighty-eight acres of land three miles from the city for the purpose of building a psychopathic hospital. The hospital is intended to serve as a place for the investigation of all forms of nervousness and conditions dependent upon mental defect and for the treatment of those which may be considered suitable for such a type of hospital. The hospital will be in charge of Dr. Theophil Klingman.

Dr. G. Carl Huber of the Department of Anatomy, University of Michigan Medical School, attended the autumn meeting of the Medical Fellowship board of National Research Council, September 20th, at Washington, D. C. On September 21st he met with a special committee of the advisory board of the Wistar Institute of Philadelphia. Recognition is to be taken of the activities of the advisory board and Wistar Institute during the past twenty years. This special committee was called to consider this action.

The Jefferson Clinic held the formal opening of their Diagnostic Hospital on Wednesday evening, October 1st, 1924. The Clinic was organized in 1911 and was the first "group medicine" clinic established in the state. The hospital has fifty beds, which will be devoted largely to diagnostic purposes. It is owned and controlled entirely by members of the medical profession. The speakers of the evening were: Dr. Angus McLean, Dean Walter McCracken Professor James E. Davis and Dr. Henry A. Reye. Dr. Alexander W. Blain was toastmaster.

The University Medical School enrollment for the year 1924-25 for the freshman class has been 142 students. These have been selected from a total number of 568 applicants. It is rather significant that relatively few men have been able to qualify for admission to this school. This, however, may be explained by the increasing requirements necessary to maintain the high standard of this institution. For a number of years the Medical School has been deluged with applicants, many of whom, after they have been admitted, have failed during the first and second years. It is believed, therefore, that it would be distinctly advantageous, both to the student and the school, that the entrance requirements be increased, thus raising the general standard sufficiently to insure against so high a group of failures. The favorable results obtained up to the present time seem to warrant this action.

Thursday, Sept. 25th, Bay City golfers among the profession journeyed to the Saginaw Country Club to accept and play the invitation tournament with the Saginaw medical golfers. Bay City was defeated by Saginaw, 9-6, at Nassau. After the game, Bay City was tendered a banquet by Saginaw. It was decided that in future contests there would be no handicaps. The scores follow:

McClinton and Leitch (Saginaw) were defeated by Grosjean and Tubber (Bay City) 3-0.

Ferguson and Cady (Saginaw) defeated Busch by Grosjean and Tropper (Bay City) 3-0.

Jiroch and Hutchinson (Saginaw) defeated Baird and McDowell, (Bay City) 3-0.

Williamson and Bruce (Saginaw) were defeated by Sherk and English, (Bay City) 3-0.

Ernst and Power (Saginaw) defeated Urmston and Mulcahy, (Bay City) 3-0.

Final score—Saginaw 9, Bay City 6.

Thursdady, Oct. 2nd, Saginaw journeyed to the Bay City Country Club for a return match with the Bay City profession. This time the Bay City men were on their game and took Saginaw into camp to the tune of 13 to 4. At the banquet which followed, it was decided to make this an annual affair and to put up a trophy of some kind, that by a certain number of consecutive winnings would become the permanent property of club so winning. The scores follow:

Mulcahy (Bay City) defeated Grant, (Saginaw) 3-0.

Baird and Farley (Bay City) defeated Ernst and Powers, (Saginaw) 3-0.

Leitsch and Cady (Saginaw) defeated Tupper and Grosjean, (Bay City) 3-0.

Busch and Criswell (Bay City) defeated Ferguson and Jiroch, (Saginaw) 3-0.

McDowell and Sherk (Bay City) defeated Williamson and English, (Saginaw) 3-0.

Urmston and Slattery (Bay City) and Harvie and McLaundress (Saginaw) halved their match, each obtaining one point.

Total score—Bay City, 13; Saginaw, 4.

Deaths

DR. F. J. Knight of Charlotte, Michigan, age 56 years, was killed by Michigan Central passenger train, Saturday, September 20th. Dr. Knight was a graduate of the University of Michigan in the class of 1895. He conducted the Knight Hospital at Charlotte, which he established seven or eight years ago. He is survived by a widow, a son and daughter.

DR. THEODORE A. McGRAW, Jr., of Detroit, aged 49 years, died Tuesday, October 14th. He was graduated from Yale University in 1902, and the Columbia Physicians' and Surgeons' College. Dr. McGraw made a number of important contributions to medical science through his study of the ductless glands in abnormal children. He is survived by a widow and a son.

County Society News

HILLSDALE COUNTY

The regular quarterly meeting of the Hillsdale County Medical Society was held at the Mitchell library, Tuesday, October 14th, at 7:30 p. m.

After the reading of the minutes of the previous meeting, the President, Dr. Bower, introduced the speaker of the evening, Dr. R. M. Olin, Commissioner of the State Department of Health, Lansing. Dr. Olin gave an instructive and most interesting address on, "The Needs of Public Health in Michigan, and How the Michigan Department of Health is Trying to Meet Them." Dr. Olin emphasized the fact that the Department of Health has charge of all the wards of the state, including those in the State School in Coldwater; pointed out some of the mistakes and inefficiencies of those institutions, and the means the Department of Health is using to remedy them.

Among the great work of the Department, he cited toxin-antitoxin, and urged the use of adequate doses the free distribution of diphtheria anti-toxin and of these preparations, up to ten, fifteen or twenty thousand units of antitoxin in severe cases.

He spoke of the ever increasing activity of the State Laboratory in furnishing free laboratory tests, so much used by physicians of the state; of the free distribution of ampoules of antiseptic solution to be used in the eyes of new-born infants; and the splendid results in the control of disease by the removal of diseased tonsils, adenoids, etc., where the Department of Health has had direct control of schools and other institutions.

He also spoke most feelingly of the urgent need for a State Hospital for crippled and other physically defective children as the next important advance in the work of the State Department of Health.

Discussion opened by Dr. Green, followed by Dr. Bechtol and general discussion. Dr. Olin, in closing, answered several questions from various members. He was warmly thanked by all present.

After the close of Dr. Olin's address, the Society proceeded to the election of an Advisory Board to act in conjunction with the Board of Trustees of the Hillsdale City Hospital, as is common with hospitals everywhere. The Board so elected are:

Dr. Sawyer, Chairman, with Doctors Green, Bell, Johnson, Hanke and McFarland as associate members, the President to act ex-officio, as chairman when necessary.

There being no further business to be transacted, the Society adjourned.

The physicians present at this important meeting were Doctors Bower, Johnson, Sawyer, Green, Miller, Whelan, Hillsdale; Robson, Bell, Fenton, Reading, Barnes, Waldron, Hanke, Ransom, Oliver, Bates, Camden, Bechtol, Montgomery and McFarland, North Adams—15.

D. W. Fenton, Secretary.

CALHOUN COUNTY

The seventh regular meeting of the Calhoun County Medical Society was called to order by President Haynes, in the Post Tavern dining room at 7:45 p. m., Tuesday evening, September 2nd, 1924.

Dr. Kingsley moved that the minutes of the preceding meeting be approved as printed in the Bulletin. Seconded and carried.

There being no further business, case reports were reported by members of the Society. Dr. Gubbins reported on "The Cabot Wire Splint in the Treatment of Fractures." Dr. Squier reported a "Case of Hyperthoidism Following Mumps." Dr. Riley reported a case of "Chondroma of the Seventh Cervical Vertebra which Pressed on the Cord." He spoke of the differential diagnosis in spinal cord tumor and simple neuritis, pointing out that in tumor the pain is extremely severe and that there is an absence of irritation or tenderness along the nerve trunks. Dr. Riley also reported an interesting case of Jacksonian Epilepsy. Dr. Fraser reported a case of brain tumor which was relieved for some time by repeated drainage of the cerebro-spinal fluid. Dr. Gessner reported briefly on "The repair of a completely severed oesophagus and trachia." Dr. Colver reported an interesting case of double maxillary empyema.

It was moved, seconded and carried that the meeting adjourn.

Attendance at the dinner, 15; at the meeting, 17.

T. L. Squier, Secretary.

HOUGHTON COUNTY

The Houghton County Medical Society held its regular monthly meeting at the Scott hotel, Tuesday, October 7th, with 13 members present.

Dr. I. D. Stern presented a paper on "Hay Fever," and gave his personal experience in the treatment of hay fever, he having had same for 37 years, the last year being the only year in which he was absolutely free of any symptoms. Dr. Stern has done considerable work in sensitization, and a very free discussion of hay fever treatment and prophylaxis was indulged in by those present.

Dr. Kennedy of Arizona, who was visiting here, was present and gave us some very interesting data on hay fever and asthma as encountered in Arizona.

At our November meeting we expect to have a display of X-ray slides, kindly loaned us by P. H. Hickey of the University of Michigan.

The Society then adjourned to lunch.

G. C. Stewart, M. D., Secretary.

IONIA-MONTCALM COUNTIES

The September meeting of the Ionia-Montcalm County Medical Society was held Thursday evening, September 18th, at Baxter's cafe, where an excellent chicken dinner was served. The attendance numbered 15. Following the dinner the members went to the city hall, where the following program was presented. Subject, "Orthopedic Surgery." The speaker was Dr. Harry B. Knapp, Battle Creek, Mich.

Dr. Knapp presented his subject in a most interesting and practical manner, giving the essential points in diagnosis, covering in detail the etiological factors producing the various orthopedic changes, and the treatment to be followed in each.

One case was presented for diagnosis.

Subject, "Treatment Chromic Myocorditis."

Speaker, Dr. M. J. Capron, Battle Creek, Mich.

The subject was so ably and thoroughly presented that there was little left for discussion. Many questions were asked by the members present. Dr. Capron discussed the etiology, diagnosis and treatment of Chromic Myocorditis. in a masterly manner.

F. A. Johnson, M. D., Secretary.

MINUTES OF THE MEETING OF THE JOINT COMMITTEE ON PUBLIC HEALTH EDUCATION—OCTOBER 6, 1924

1. The State Joint Committee on Public Health Education held its first meeting of the year at the Michigan Union, Ann Arbor, Mich., on Monday, October 6, 1924, noon.

2. The following members were present:

Michigan State Medical Society: J. B. Jackson, M. D.; C. C. Clancy, M. D., of Port Huron, President of the State Medical Society, was present representing Dr. Angus McLean of Detroit, who was appointed in place of Dr. Biddle, whose term of office had expired.

University of Michigan: President Burton, Doctors Cabot, Huber, Sundwall and Henderson.

Michigan State Department of Health: Dr. R. M. Olin, Lansing.

Detroit College of Medicine and Surgery: Dr. W. H. McCracken, Dean, Detroit.

Michigan State Tuberculosis Association: Mr. T. J. Werle, Lansing.

Michigan State Nurses' Association: Miss Mary A. Welsh, President of the State Association, was represented by Miss Alice L. Lake, Educational Director of the Training School for Nurses of the University of Michigan.

Michigan State Conference of Social Work: Mr. A. H. Stoneman, Lansing.

3. Reading of the minutes of the last meeting. Mr. Henderson.

4. Report of the Committee relative to the payment of traveling expenses of those members of the State Medical Society who take part in health lectures. Dr. J. B. Jackson, President of the Medical Council, reported that the Medical Society had, by official action, agreed to meet the expenses incurred by doctors in connection with the giving of health lectures after January 1, 1925.

Moved and supported that the Joint Committee formally express its appreciation of this action on the part of the State Medical Society. Motion carried.

5. Dr. J. B. Jackson reported that at the meeting of the State Medical Society, held in Mount Clemens on September 9, 10, and 11, Dr. Franklin Martin of Chicago, presented, on behalf of the American Medical Association, the Gorgas Memorial Fund project with reference to the proposed national health education program. It was pointed out that the functions of this national health education program and those of the Joint Committee on Public Health Education as now organized and conducted in Michigan, are along very similar lines, and it was suggested that when the national health educational program becomes established, that official steps be taken looking toward a program of co-operation in Michigan between the State Joint Committee and the National Corporation.

6. Motion to add a new unit to the State Joint Committee, namely, the Wayne County Society Committee on Education, this Committee to be represented on the Joint Committee by its Chairman or some person designated by the Chairman. Motion carried. The Secretary was instructed to communicate with the Wayne County Medical Society Committee on Education with reference to this matter.

7. Motion to leave the matter of the number of circulars to be printed, containing information relative to health lectures on Goitre, as prepared by Dr. Cowie and his Committee, to Mr. Henderson. Carried.

In connection with the discussion as to the number of slides which might be available for use in connection with health lectures, Dr. MacCracken informed the Committee that his institution was in position to furnish a number of slide sets.

8. Mr. Henderson was instructed to prepare an outline of the State showing regions where health lecturers were most needed and to submit copies of this outline to Doctors Jackson and Warnshuis, with the understanding that the matter would be brought to the attention of the County Medical Societies within the areas indicated.

Dr. Jackson called attention to the fact that the State Medical Society was planning to appoint a full-time man who might be available for co-operation with the Joint Committee's Health Education program.

9. The appointment of a committee to prepare lecture outlines on tuberculosis, cancer, and other subjects of similar importance, was referred to Dr. Burton. This matter was carried over from the last meeting.

10. The Committee approved of the following persons as speakers on health education, and such other members of the Hygiene and Public Health staff as may be recommended by Dr. Sundwall, Director of the University Public Health Service.

11. The next meeting of the Joint Committee will be held in Battle Creek on Wednesday, January 14. It was suggested that this meeting be held in conjunction with the meeting of the Medical Council.

12. The meeting adjourned.

W. D. Henderson, Secretary.

JOINT COMMITTEE ON PUBLIC HEALTH EDUCATION

The Editor of the Journal of the Michigan State Medical Society:

You, no doubt, will be interested in the following brief report of Health Education Lectures given during the past year under the auspices of the Joint Committee on Public Health Education.

Interest on the part of the people of the state in our Michigan Health Education program is very marked, as is shown by the fact that during the past year 48 per cent more assignments were made than during the preceding year, and, what is of more significance, the attendance upon these lectures shows an increase of 160 per cent over that of the preceding year.

One or more health lectures were given by the following members of the speaking staff of the Joint Committee: Bartlett, Barbara H., A. B.; Bell, Juliet, A. B.; Boys, C. E., M. D.; Brown, G. M., M .D.; Brubaker, E. W.; Bruce, James D., M. D.; Bunting, R. W., D. D. Sc.; Cabot, Hugh, M. D.; Carr, E. I., M. D.; Camp, C. D., M. D.; Case, J. T., M. D.; Crane, A. W., M. D.; Crossen, H. F, M. D.; Davis, W. R., D. D. S.; Delavan, Marjorie, A. B.; Dixon, R. L., M. D.; Dodge, W. T., M. D.; Dubois, C. F., M. D.; Dubois, W. J., M. D.; Fischer, A. F., M. D.; Forsythe, W. E., M. D.; Fraser, W. H.; Garber, F. W., M. D.; Haines, Blanche M., M. D.; Hartwig, H. C., D. D. S.; Henderson, Robert, M. D.; Henderson, W. D., Ph. D.; Hess, C. L., M. D.; Hickey, P. M., M. D.; Hirn, W. C., C. E.; Huber, G. Carl, M. D.; Hutzel, Melita G.; Jackson, J. B., M. D.; Johnston, C. H., M. D.; Kiefer, G. L., M. D.; Leenhouts, A., M. D.; LeFevre, G. L., M. D.; Loucks, R. E., M. D.; McClelland, Carl, M. D.; McLain, R. W., M. D.; Manwaring, J. G. R., M. D.; Marshall, F. B., M. D.; Mitchell, E. D., A .M.; Mitchell, Helen S., Ph.D.; Nesbitt, E. D., M. D.; Norman, Estelle, M. D.; O'Donnell, W. S., M. D.; Miss Ostrander; Parsons, John P., M. D.; Pierce, E. B., M. D.; Poole, F. A., M. D.; Randall, H. E., M. D.; Reeder, J. A., M. D.; Rickert, U. G., D. D. S.; Sinai, Nathan, D. V. M.; Slemons, C. C., M. D.; Sundwall, John, M. D.; Warnshuis, F. C., M. D.; Wilburn, Llewellyn, A. B.

Health lectures were assigned to the following centers, the number assigned to any given place varying from one in the small communities to 76 in Detroit:

Albion	Gobles	Neeley
Alma	Grand Blanc	New Troy
Ann Arbor	Grand Haven	North Adams
Baraga	Grand Rapids	Olivet
Battle Creek	Grattan Center	Onsted
Bay View	Grosse Pointe	Ontonagon
Benton Harbor	Hancock	Owosso
Berrien Springs	Highland Park	Pentwater
Buchanan	Hillsdale	Pittsford
Byron	Holly	Plainwell
Calumet	Hopkins	Port Huron
Cass City	Horton	Portland
Charlotte	Houghton	Redford
Chelsea	Hubbell	Reed City
Clare	Jackson	River Rouge
Cohoctah	Jenison	Rochester
Constantine	Kalamazoo	Rockford
Deckerville	Kent City	St. Clair
Detroit	Lansing	St. Johns
Dixboro	McBain	Sand Creek
Dorr	Lakeview	Schoolcraft
Durand	Manchester	Sebewaing
East Lansing	Marquette	Shelby
Eaton Rapids	Marshall	South Lyon
Ferndale	Milan	Three Rivers
Flint	Monroe	Unionville
Fruitport	Morley	Vernon
Galesburg	Muskegon	Waldron
Galien	Muskegon Hts.	Whitmore Lake
White Pigeon		Ypsilanti

Number of health lectures assigned outside of Detroit	197
Number of health lectures assigned in Detroit	76
Total number of health lectures assigned	273
Average attendance per lecture outside of Detroit	170
Average attendance per lecture in Detroit	620
Total attendance on lectures in Detroit	32,000
Total attendance on lectures outside of Detroit	47,000
Total attendance all lectures assigned	79,000
Increase in number of lectures assigned during the past year over preceding year	48%
Increase in total attendance last year over the preceding year	160%

I am sending to your address under separate cover a copy of our Health Education Bulletin announcing speakers and subjects for 1924-25.

Yours sincerely,

W. D. Henderson, Secretary.

Book Reviews

FUNDAMENTALS OF HUMAN PHYSIOLOGY. R. G. Pearce and J. J. R. Macleod. Third edition, 349 pp. Price $3.50. C. V. Mosby Company, St Louis, Mo.

This third edition is available with only such changes as were necessary to bring the subject up to date. The book is elementary in a measure, but is extremely comprehensive and reviews the modern facts and theories of human physiology.

LIFE INSURANCE EXAMINATIONS: F. W. Foxworthy, Indianapolis. Cloth, 738 pages; price $9.00. C. V. Mosby Co., St. Louis, Mo.

With the aid of many well known collaborators the author has prepared this text that will materially aid all doctors in conducting insurance examinations. It is bound to be a volume that will aid all of us in conducting physical examinations.

DISEASES OF THE EYE, by George E. de Schweinitz, M. D., LL.D., Professor of Ophthalmology in the University of Pennsylvania. Octavo of 865 pp., 434 illustrations and 7 colored plates. Cloth, $10 net. W. B. Saunders Co., Philadelphia and London.

Again we have the leading and pre-eminent text and authority available in a revision that is abreast of the hour. It is a text that is recognized as the authority on the subject of the eye from the pen of the author who is a recognized international authority. No library is complete without this text.

DETROIT ACADEMY OF SURGERY

The following are the preliminary announcements of the meetings of the year of The Academy of Surgery of Detroit. A definite announcement will be sent you one week before each meeting.

Friday, October 10, 1924. Allen B. Kanavel, M. D., Chicago, Ill. Detroit Golf Club. Golf in the aftenoon for all who wish to play. Dinner at 7 p. m. Address 8 p. m.

Friday, November 14, 1924. Clinical Demonstration by the Harper Hospital Staff.

Meeting begins promptly at 8 p. m. Smoker and lunch.

Friday, December 12, 1923. G. W. Crile, M. D., Cleveland, Ohio. Dinner Detroit Athletic Club at 6:30 p. m. Address 7:30 p. m. Subject to be announced later.

Friday, January 9, 1925. Jefferson Clinic, 2201 E. Jefferson Ave. Address by Dr. Starr of Toronto. Meeting begins promptly at 8 p. m. Subject to be announced later. Smoker and Lunch.

Friday, February 13, 1925. Eugene Pool, M. D., New York City. Dinner Detroit Club at 6:30 p. m. Address 7:30 p. m. Subject to be announced later.

Friday, March 13, 1925. Providence Hospital, Clinical Demonstration by the Staff, 8 p. m. Smoker and lunch.

Friday, April 10, 1925. Address 7:30 by John G. Clark, M. D., Philadelphia. Dinner 6:30 p. m.

Friday, May 8, 1925. Clinical Meeting at St. Mary's Hospital 8 p. m. Annual Meeting. Election of Officers. Smoker and lunch.

Friday, June 19, 1925, Prince Edward Hotel, President's Dinner 6:30 p. m. Address by President Brooks, followed by address by Dr. W. D. Haggard of Nashville, Tenn., Prof. Surgery at Vanderbilt and President of A. M. A. Those wishing to play golf in the afternoon will be guests of Dr. Frank Kelly at the Essex Golf Club.

CLARK D. BROOKS, President.

THE BROOKLYN PLAN OF PERIODIC MEDICAL EXAMINATIONS

The Medical Society of the County of Kings has taken up the problem of Periodic Medical Examinations, and has demonstrated a practical method of making them. The Medical Society recognized that the problem was a double one:

1. The physicians had to be reached in order that they should become desirous of making the examinations and be prepared to do them in a way that should be standard, uniform, and efficient. This part of the problem was purely medical, and was handled entirely by physicians through the County Medical Society.

2. The second part of the problem was that of educating the people regarding the value of the new service which the physicians were offering to them. This part of the problem was one of salesmanship through organizations of laymen, and consisted in influencing the people to go to their physicians and take advantage of their examination service. The Brooklyn Bureau of Charities was the principal lay organization that was instrumental in the education of the people.

The two organizations—medical and lay—coordinated their activities through a special committee, called the Brooklyn Health Examination Committee, which was made up of both physicians and laymen, and represented all groups of the community, including the Medical Society, Health Department, Chamber of Commerce, and churches. The medical activities of the committee were managed by a sub-committee of which Dr. Glenworth R. Butler was chairman. The expenses of the campaign, which were considerable, were met from several available sources, including the Committee on Dispensary Development of the United Hospital Fund.

The campaign, in promotion of the periodic medical examinations was both extensive and intensive and consisted of the following activities:

1. There were meetings of the Medical Society of the County at which the project was fully considered and explained.

2. The Medical Society conducted an examination of one hundred physicians in active practice in order to demonstrate the method of making the examinations, and to show the physicians directly that they themselves could profit by the examinations.

3. Letters and pamphlets were prepared for both physicians and the general public.

This is only a meager outline of the program, which was successfully carried out durlng last spring and early summer. The physicians were examined according to schedule, and the lay or organizations did their part in popularizing the movement, which is still in its infancy and is growing fast.

The details of the Brooklyn Periodic Medical Examination movement in Brooklyn have been published in the September issue of the **Long Island Medical Journal.** This is a Community Health number, and over a third of its pages are upon the examinations campaign. Copies of the Journal may be obtained from the Editor of the **New York State Journal of Medicine,** 17 West 43rd Street, New York.

THE KNOWN AND THE UNKNOWN ABOUT PSORIASIS

A few years ago, Jay Frank Schamberg, philadelphia (Journal A. M. A., Oct. 18, 1924), and George W. Raiziss carried out some studies (which have never been published) on the purin metabolism of psoriatic patients. They failed to find any disturbance of the uric acid metabolism. Unless there is coincidentally a distinct renal factor present, the blood uric acid is normal. The question of any etiologic relationship between gout and psoriasis is answered definitely in the negative. There is no demonstrated evidence that psoriasis is associated with any disorder of the gastro-intestinal tract or of the pancreas. There is no special habit of body or any nutritive disorder associated with psoriasis. Attacks of psoriasis have been reported in the literature as coming on after shock, fright and similar causes. Some authors have suggested a neuropathic origin as the cause of the disease. Schamberg can find no adequate scientific basis to warrant psoriasis being regarded as a disease of nervous origin. Nor can he see any parallelism between psoriasis and any disease of ductless origin. No parasite thus far found can be incriminated as the cause. However, on the basis of extensive studies Schamberg believes that there is a nitrogen retention in psoriasis, but no person possesses the scientific data that would warrant him in dogmatically affirming or denying the truth of either the parasitic or the metabolic hypothesis. The solution of the problem is for the future to determine. Until the cause of the disease is discovered, the most essential principle of therapeutics in psoriasis is to inactivate the psoriatic process; i. e., to convert the active into an inactive or quiescent stage. Then, previously ineffectual remedies become effective. Failure in clearing up the eruption in psoriasis is not caused by ignorance of what remedies to use, but when to use them. Even the roentgen ray, a useful palliative agent, commonly fails when used during an inappropriate

stage. The failure to recognize the inefficacy of roentgen-ray therapy in an active psoriasis has sometimes led to this method of treatment being persisted in to an unwarranted degree. Schamberg has seen cancer of the skin follow such ill advised efforts. Schamberg favors a low protein diet, as an effective mode of treatment. He says if one places a psoriasis patient for a number of weeks on a diet containing about 4 gm. of nitrogen a day, without other treatment, one will observe, particularly in extensive eruptions, an astonishing involution. Per contra, a diet of 20 gm. of nitrogen a day will tend to aggravate an existing eruption. There are often simpler and more rapid means of bringing about an inactivation of the psoriatic process. Different substances and methods have from time to time been advocated. The intravenous injection of vegetable proteins such as an extract of alfalfa seed, suggested by Van Alsten; the injection of an enterovaccine containing chiefly the fecal streptococcus and colon bacillus, advocated by Danysz and warmly commended by Babouraud; the subcutaneous or intravenous injection of a typhoid or colon bacillus vaccine, and finally, autoserum injections. All these agencies doubtless act in a similar manner but in different degrees. They all produce a leukocytosis, but in different degrees. They all produce a leukocytosis, proportionate in large part to the degree of reaction induced. They may have other side effects on antibody production, on the blood and skin enzymes, and likewise an influence on metabolism. Further light is needed on the exact biologic effects induced. One of the most useful of these procedures is autoserum injections. The injection tends to inactivate the psoriasis and aid in inducing a state of quiescence. During this stage, the roentgen rays, chrysarobin, and many other measures, promptly effect a disappearance of the eruption. While autoserum injections do not act equally well in all cases, Schamberg's experience is that they constitute a valuable therapeutic measure. There are a few cases that are refractory to inactivation by any procedure. It is possible that certain drugs, injected intravenously or intramuscularly, may without design, produce a secondary foreign protein effect.

DIAGNOSTIC ERRORS LEADING TO UNCALLED FOR APPENDECTOMY

Henry Wald Bettman, Cincinnati (Journal A. M. A., Oct. 18, 1924), collected from private practice reports of some 300 cases in which appendectomies had been performed without relief. Patients could not always furnish accurate histories. Every case in which the history was uncertain or inconclusive was rejected. This rigorous censorship left only 170 cases for statistical presentation, although fifty other cases had features of practical importance. A careful analysis of the 170 cases led to the rather startling conclusion that fully two-thirds of all the patients had never been carefully studied before the operation, and the indications for any operation in at least one-third of the cases were very imperfect, indeed. Not one-third of the patients had had a competent and thorough examination in the modern sense. Not that large a proportion had had an analysis of the gastric juice, any adequate observation under proper dietetic conditions or a complete roentgen-ray examination. Many were subjected to operation "on suspicion" because their digestive disturbances had resisted medical treatment and because many of them presented right iliac sensitiveness, gaseous distention or other signs or symptom that seemed to point to the possibility of chronic appendicitis. In more than one-third of the cases the indications for an operation were quite insufficient. Of the 300 patients, 35 complained of serious disorders traceable to the operation itself. The commonest sequels were hernia, ileac stasis, omental and other adhesions, and neurasthenia.

THE EFFECT OF INTRAVENOUS INJECTIONS OF CALCIUM CHLORID ON THE KIDNEY

During the last two years, in the Mayo Clinic, patients with obstructive jaundice requiring operation have been given intravenous injections of calcium chlorid preoperatively in order to reduce their coagulation time, and to assist in the prevention of bleeding. Five cubic centimeters of a 10 per cent aqueous solution of calcium chlorid has been given daily for three days, and the results —the hastening of blood coagulation, as evidenced by a lowering of blood coagulation time, and the absence of postoperative hemorrhage in jaundiced patients—have been striking. John P. Bowler and Waltman Walters, Rochester (Journal A. M. A.), Oct. 18, 1924), report now on their experimental work done on dogs on whom an artificial obstructive jaundice was produced by ligating the common bile duct under anesthesia and with aseptic technic. The effect of intravenous injections of calcium chlorid in various amounts on the kidney was studied, the kidneys being removed at the necropsy. With the exception of the usual changes in the kidneys accompanying obstructive jaundice, no other structural pathologic changes were found. Nor was it possible to produce deposits of calcium in the kidneys by doses ranging from 8 mg. for each kilogram of body weight to the lethal dose of 280 mg. for each kilogram of body weight in normal dogs, and of 380 mg. for each kilogram of body weight in jaundiced dogs. It was not possible to demonstrate a deleterious effect on the kidneys of any of these dogs, either clinically or pathologically.

PRIMARY GIANT CELL TUMORS OF THE VERTEBRAE

Dean Lewis, Chicago (Journal A. M. A., Oct. 18, 1924), reports the case of a girl, aged 7 years, who had a tumor of the fourth dorsal vertebra, marked spinal cord symptoms had developed. The tumor was removed surgically. Today, three years later, recovery is complete. The child runs, skates, goes to school each day and is practically normal. The tissue removed contained many calcereous particles. On section there were found numerous rather large round and spindle cells, which formed the great part of the growth. Scattered throughout were giant cells. Numerous trabeculae of bone were found. This bone was apparently newly formed. The growth was undoubtedly ossifying. Seventeen other cases of primary giant cell sarcoma or tumor of the vertebrae appear in the literature. The lesion occurred in the cervical vertebrae, once; in the dorsal vertebrae, six times, in the lumbar vertebrae, seven times, and in the sacrum, once. In three cases, no mention is made of the location of the affected vertebrae. In none of the seventeen cases have metastases occurred. Local recurrences have been noted. Ossification cases, paraplegia has persisted, notwithstanding has occurred in three of these growths. In three the fact that the growth has disappeared or ceased to enlarge. An abstract of the histories of these cases is given. In none of these tumors have metastatic growth been observed. Local recurrences have occurred in several, but these have been controlled rather easily by a number of different measures.

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Original Articles

THE DRIVE OF CIVILIZATION, DISEASE AND DECADENCE*

JOSEPH RILUS EASTMAN, M. D.
INDIANAPOLIS, INDIANA

Brooks Adams, in his book "The Law of Civilization and Decay," records evidence which can hardly be denied showing that when a highly developed society disintegrates under the pressure of social and economic competition it declines because the energy of the race has been exhausted. It fails to rise because the survivors of such a society lack the vigor necessary, for renewed concentration. If such a highly organized civilization is restored after destruction the material for its restoration must be supplied by the bringing in of barbarian blood which has not been touched by that civilization which has risen and fallen.

Human society oscillates between barbarism and civilization. A tired civilization goes down and a fresh one comes up from barbarism. This is true of great social masses and it is true in the concrete individual instance. The exceptionally devoted, striving school-boy usually comes to manhood exhausted, to be replaced by the wild barbarian, or the lazy Ned, who comes to manhood fresh.

Among all the causative factors pertaining to the social, moral and physical ills which have contributed to the downfall of civilizations in the past and which distress humanity now, none is so important as the factor of fatigue. The intensive drive of civilization is crowding us near to, if not beyond the danger point of physical tolerance. The drive here meant is not that obscure, deep, powerful motivating drive which lashes us on to what has been called the "satisfyingness of mastery and approval," nor the fundamental biologic drive of hunger, sex and physical safety. It is the readily perceptible drive of the neurotic, psychopathic, speed-mad civilization fostered by our modernities to which attention is invited.

Homo sapiens presents a case for the physician. Let the physician correctly evaluate this factor of fatigue, restore the man physically and mentally, and much less will be left for the priest and the politician to do. This correction could be made with very little sacrifice for it is to the pagan services of civilization that the fatigue is due. Needless exertion and vain, vaulting ambition are to blame.

Humanity is succumbing to exhaustion in its struggle to avoid what McKenzie calls the hardship of anticlimax. It must leap from climax to climax. We are so very tired and so confused that we have lost the power to appraise and orient ourselves, and although the remedy is not far to seek, we do not find it. We have not sense enough to sit down. Let us convince brain workers that increasing fatigue is dangerous, that it renders a man unfit for any duty; enforce upon him the needed long repose, and we shall see him rise up, enabled to wage successful combat with many of the pathologies of his own body, and, moreover, as one awakened from long, refreshing sleep, we shall find him ready to proceed in patience with the calm, sweet reasonableness born of normal physiology to the solution of many of humanity's troublous problems of morals and statecraft.

Does humanity realize that it is tired? Hilaire Belloc, in the Yale Review of October, 1923, mentions the element of fatigue as an important influence in determining the selection of books, and Fred C. Kelly, in the humorous Wisdom of Laziness, hints pointedly that he and many other great men have long been tired. No doubt nearly every one has a more or less definite impression that humanity is wobbling a bit under its load. Do we know or care about the perils of fatigue? Is it not a matter deserving interested attention?

Why should humanity *not* be tired? In view of the extraordinary strain and stress of war and reconstruction, in view of "drives" for this purpose and that, in view of repressions, urges, exaltations, and "biologic joy-rides," need anyone wonder that humanity is tired? There is more reason to wonder that the fatigue has not led to general protest and a demand for slowing down.

*Read before Section on Surgery, M. S. M. S., Annual Meeting, Mt. Clemens, Sept., 1924.

If we have at the present time a peak development of human fatigue the explanation is perhaps to be sought chiefly in the merciless drive which began in 1914 and which is still on. A retrospect of these ten years should convince anyone that there is abundant reason for the existence of a lowered index of physical, mental and moral resistance. Since the Armistice we have had drives for this and drives for that until humanity is almost driven wild. The efficiency hound who break into the luncheon club in an hour which should be one of relaxation and recuperation has always been a bother, and he is rapidly becoming a real menace. *One more drive we should have, one planned to drive habitual drivers off the field.* It is not surprising that most of us are irritable and behave in our social and business relations like a man wearing a new lamb's wool undervest. It is not surprising that the hospitals for the insane are full to bulging. There is no less truth than humor in the remark of O. O. McIntyre, that the world has less need of go-getters than we think. It truly needs more of those who appreciate and defend the gentle art of loafing. Kelly may well be taken seriously when he says that lazy people are the hope of the race.

If a man struggle past the norm beyond which he cannot safely go, who is there to stop him, to turn him from the screech and rattle of the cities into the quiet places which are good for body and soul? Generally speaking, no one. From the time he crosses the promontory of the sacrum, mountains higher and ever higher are pointed out for him to climb. He is urged, always and everlastingly, to choose the harder way.

In the drive of education we have sought to take every man, *nolens volens*, fit or unfit, and push him up to an intellectual standard; and he breaks under the strain unless there is in his germ protoplasm that which endows him with intellectual potentialities. Many biologists know that it is time to speed down production, so to speak, in over-education, for humanity is cracking at the top. Do the educators realize this?

No priestess on a tripod is needed to warn us that the highly civilized races of mankind are going backward physically; that the advanced races of the world are, as Wiggam says, biologically plunging downward. Wiggam, in his New Decalogue of Science, reminds us that civilization always destroys the man who builds it; that many diseases are chiefly the by-product of our civilization; that the tension diseases—cancer, goitre, heart disease, degenerative diseases of the arteries, psychoses, insanity and the multiform minor mental and nervous derangements which affect men's behaviour unfavorably, are increasing.

Physicians, the scope of whose reading embraces something of the history of disease will incline to Wiggam's view. The American Indian never knew tuberculosis until he came into contact with the civilized white man,, nor did he succumb to many of the microbic infections which Carr-Saunders has shown are largely the product of our civilization.

Doctor W. A. Evans of Chicago once said that if he were asked to sum up in a single word everything that relates to the causation of tuberculosis, the one word would be "house," the dark, tight house of civilization.

One of the finest of all races physically, the Tasmanian, says Wiggam, melted like a glacier under a tropic sun before the onslaught of measles given to them along with our Golden Rule.

A thousand years ago China came to a point in her civilization where she said, "What's the use of it?" Until recent years she has not tried to lead nor to follow us of the Western half of the world in matters of disease prevention, and yet physicians who have practiced in China, according to Stanley High in "China's Place in the Sun," are almost universal in the assertion that the Chinese physique, in recovering from severe operations and in the ability to throw off disease, is superior to that of westerners. Surgical shock is very rare. Rapidity of recovery from terrible injuries is amazing, and in particular it has been observed that the Chinese are able in a remarkable way to resist the effects of blood poisoning. It is the common opinion that under similar conditions the Chinese will make a more certain and rapid recovery from a major operation or a serious illness than the average American. A coolie uncomplainingly propels a load of more than eleven hundred pounds on a large wheelbarrow. Eating unspeakable food, carrying unbelievable loads for unbelievable distances, sleeping anywhere with a brick for a pillow, they seem absolutely immune to innumerable diseases and dangers which menace the path of the foreigner in China.

In studying the relation of western civilization to health, it is well to consider the fact that in the small city of Manila during the year 1923, nineteen persons died who were more than one hundred years old.

Coming to the consideration of the fact of high civilization upon the incidence of disease in middle life and old age, as we look for evidence bearing upon this question we find that interesting and arresting facts relating to this aspect of the problem abound on every hand.

For example, the following data concerning cancer.

The African in his native country is practically immune from cancer; but observing him after he has become a part of our civilization in the United States, we note that he is not infrequently the victim of cancer. However, owing to the fact that in America he still retains some of the languorous, care-free habits of his original habitat, he is less frequently attacked by cancer than his strenuous white host. Sir Arbuthnot Lane, speaking particularly of Jamaica, says there is no cancer among the people of the West Indies, excepting in the white and among those blacks who have adopted the habits of civilization.

It is believed that cancer was little known in Japan before the appearance there of Occidental civilization. In Egypt it is rare, and in India, despite the filth and over-crowding, the dread spectre of cancer rarely shows itself except in the case of chewers of the betel nut, and the dwellers on the high, cold plateaus where charcoal kangri basket stoves are worn under the flowing robes.

The naked, or almost naked, races hardly know the disease, and our American Indians do not have it so frequently as our whites.

In the Arctic Circle cancer is said to be unknown. However, the statement that it is altogether absent here is perhaps open to doubt, in view of the meagreness of the researches made. Those who have studied the subject of cancer among Eskimos have found it to be not entirely absent from these inhabitants of the far north.

In Mexico, Central America and South America, cancer is said to be of comparatively infrequent occurrence. In North America the frequency of its incidence decreases as the distance from the equator decreases. Bainbridge (The Cancer Problem) and Williams (The Natural History of Cancer) find that cancer mortality in the large cities is lowest among the poor, and highest among the prosperous and well-to-do. Williams regards high feeding and easy living as potent factors in the causation of cancer.

Studies made by Seligman during eleven months among the inhabitants of New Guinea and its neighboring islands reveal that whereas these people are not utterly free from malignant tumors, such conditions are very rare among them. The inhabitants of these islands, as Bainbridge says, having just emerged from the Stone Age, are so little contaminated by the influence of white people that they have had practically none of the eruptive diseases and no venereal diseases. It was found that these islanders are free from gout, arteriosclerosis and other conditions due to faulty metabolism.

Seligman found no cancer among the original native inhabitants of Australia. This writer, in the third scientific report of the Imperial Cancer Research Fund quoted by Bainbridge, concludes that in the rare cases of malignant diseases occurring among the inhabitants of the various islands visited, the incidence of the disease seems to be associated with the adoption by some islanders of a mode of life which simulates to a certain extent that of the civilized white man. That the others are practically immune suggests that the mode of living is an important factor.

Williams has maintained that change from the pastoral life of former times to the pent up, crowded, driving life now led by people in the cities, is responsible for the increase of cancer in occidental countries. He speaks of the rapid encroachment of civilization upon savage territory and the modification of the methods of existence of the latter as explaining at least in part the increased susceptibility of savage races coming under the influence of civilization. Bainbridge concludes that the report made recently by the British Registrar General shows that the lowest cancer mortality is found where conditions of life are hardest. Thus the rapid increase within the last century and a half of wealth, of material and general prosperity, is cited as a causative factor in the increase of cancer in Europe and America. This is a way of saying that while occidental civilization was attaining its highest development, marked increase of cancer came as a by-product.

It has been shown by others that over-crowding and filth do not increase the incidence of cancer. In London cancer is most common in the least densely populated areas where the inhabitants represent the highest civilization. It has been shown by nearly all investigators that primitive simplicity of living decreases the incidence of cancer, and whereas it may be contended that primitive races are occasionally afflicted by cancer, nevertheless, the disease it seems has its highest incidence among the people of Europe and North America, the regions par excellence of occidental civilization. It may therefore fairly be suspected of being a by-product of our driving, striving living, if indeed it does not rest under an actual indictment of guilt.

The increased incidence of toxic goitre in the United States is without much doubt another evil effect of a civilization which in its brutal disregard of the physical resistance of its victims drives them ahead like leaves before the wind. As we do not know the cause of goitre it may be said that the foregoing state-

ment cannot be justified. Can it be proven? *A priori,* no; *a posteriori,* yes. What, aside from surgery, is the principal resource of the physician in treating exophthalmic goitre or Graves' disease? Rest. The rest cure in goitre was used by our forerunners in medicine. Andre Crotti, an authority, says it is as old as the world itself, and adds that Nature applies it constantly. Nature rests in the winter from her spring and summer activities. In medicine rest is a panacea. The best medicine for an over-burdened stomach is rest. Rest is an essential factor for the recuperation of an overdriven heart. It is a necessity for a wrecked nervous system. No wonder then that it was applied to relieve the symptoms of poisonous thyroid glands.

Note what Doctor Crile of Cleveland says in this connection. "If the brain could enter into a state of actual hibernation like the bear, thyroid poisoning would certainly be cured," and Crotti remarks that only by permitting the entire organism to hibernate can we expect to bring about a cure.

What does every physician do first with his toxic goitre patients? He enforces rest in the recumbent posture with an ice-bag over the heart. What lesson does this bring to a physician who sees not merely the individual patient before him, but also sees that patient in his or her relations to humanity as a whole, and sees all individuals in their relation to the brutal influences of environment? Look at the vagatonic, bird-faced woman of business lined up at a one-minute lunch counter; observe the teachers as they pass the schoolhouse door, and see how many of them have bulging eyes and goitrous necks. They are in the drive of civilization. Every physician knows he cannot help these women until he gets them out of it for a time at least. Why not demand rest for them and for all overtaxed humanity? Where is our common sense? Why do we not say to employers, educators and everyone else that these people should rest before the breakdown comes, not after; that they are cracking under the strain of the drive[2].

With respect to the so-called "internal" diseases, the following observations should be interesting. J. K. Goar, President of the Actuarial Society of America, quoted by Wiggam, states that the death rate is increasing at the higher age periods and that the mortality rate from diseases of the circulation and kidneys has increased within this generation by 50 per cent. And Ferderick Hoffman, the distinguished statistician, believes that affections of the circulatory and urinary organs are much more common in a fatal form in early old age than would seem necessary.

The report of the survey of our national physical assets made by Eugene Lyman Fiske at the suggestion of Herbert Hoover concludes as follows: "So far from the draft records giving an exaggerated impression of the degree of physical deficiency that prevails, it is clear that they convey an under estimation of the true conditions. So far as they go they may well arouse concern as to the physical state of civilized man, but much must be added for defects unrecorded which may in later life impair efficiency and lower resistance to disease. A recent report of the British Military Committee was even less reassuring."

Heart disease claims more victims in civilized countries than any other malady, and it is well known that the heart rarely springs a leak except as the result of high pressure evidenced in other parts of the system. Strain and struggle is the cause of much heart trouble. The human heart is trying to keep abreast of the foolish automobile which goes the pace that kills. A preventive is near at hand. It is as Russell Seads, a lay writer, says—a little more sleep, a little more leisure given to complete relaxation and what is most needed for the physical well-being of Americans and all victims of high civilization, more of the "deuce may care" philosophy of Sancho Panza.

Doctor Charles H. Mayo says this of appendicitis and the drive of civilization: "The belief has often been expressed that an enormous number of persons must have died from the disease in the past, but appendicitis was rare in the past ages. It is a disease of modern life. A soil has been engendered and been made susceptible to disease by changes in food which have occurred within the last few decades." The increased incidence of appendicitis, he says, has the same relation to modern life as the increased mortality from cancer.

The main thesis of Oswald Spengler's "Decline of Western Culture," discussed by W. K. Stewart in the Century Magazine for September, 1924, is that human history has not been a continuous development. In the years which the records cover there have emerged eight ripe cultures. Each nourished and developed its own peculiar style to its full possibilities and then began to decline. Each declined sooner or later. As in all things organic, decay, he says, follows upon growth; each culture passed through childhood, youth, manhood and old age. Thus we see that a curve plotted for the course of history would, according to Spengler, present a series of eight rises, or humps, no one of which would necessarily be higher than the others. Stewart notes that we in the western world have assumed somewhat lightly that the general trend of the curve of civilization is continuously upward. Humanity

in our civilization, expects to be carried higher and higher upon the pillows of Providence. Spengler sees men huddling together in big cities and becoming voluntarily sterile. He recalls that the fall of the birth rate was noted by Polybius in Greece and that this fall was marked in declining Rome. It is everywhere you go—in Berlin, Paris, London and New York, just as it once was in Antioch, Alexandria and Rome. Stewart, in the essay mentioned, reminds us that Spengler is gloomy, that he looks forward to winter, the death of western culture, when the western soul, weary of striving, sinks back into its home. He has been called a pessimist, a defeatist of humanity, but this he denies, asserting that to accept the inevitable, to embrace destiny, is the mark of the highest wisdom.

Stewart asserts that there is much for us to do, and that by doing it we may maintain our civilization for centuries on a relatively high level.

Facile criticism may attempt to set aside as useless croaking the warnings of Spengler. Folley may ignore the lessons of accurate historical chronicles, but reason ought to try at least to learn something by study of the underlying biologic facts which determine the course of human tendencies as recorded by history.

As Spengler has said, all the civilizations of history may be represented by an upward curve. We cannot expect the fate of these other civilizations to be reversed for us. Certainly if humanity is racking itself to pieces in modern civilization we cannot expect it to follow the course of a continuously rising curve. There is no biologic basis for such a hope. We have had our acclivity, and whether we reach the declivity soon or late surely depends to a great degree upon how much we hurry. Hurry means tension, and tension means disease and danger for humanity in all its relations.

Today every city in America is more or less like that pictured in these lines taken from the poem of Christopher Morley in the Atlantic Monthly for August, 1924. It would be well if everyone, especially the young, would read and reflect upon this poem.

See her, then—this perfect, perfect city,
This wild fantasia of an artist's dream.
And who has time for dreaming? Throb, throb, throb
I tell you, there is madness in her method
That creeps into the soul. First, just a grain,
A little grain of innocent, harmless haste
And brisk ambition. Then it swells and rots,
Until the inward precious pulse of thought
Is bogged and netted in a lace of nerves;
Until the generous essence, life itself,
Is something we must clutch at, fever for,
Magnificent damnation! Faster, faster,
Herded in mobs and capering from destruction,
With yells and mirth and talking, always talking,
We're scouting to and fro.
And then the telephones go ring, ring ring!
The eager spirit answers, Hurry! Hurry!
Against the naked fury of the brain
The clock is beating faster, tick-tick-tick—
You'll tick yourselves to death.

The face of humanity today is the face of the fainting Marathon runner. Fatigue is written there boldly. The ignorant are rising and will soon attempt to dominate the world because the intelligent are tired. Give intelligence a rest and sleep and ignorance will be routed as it was when our iivilization was young. Let us not make a Frankenstein of our civilization by mad hurrying. Effective dealing with diseases of mind and body and state will follow rest and sleep. Robbed of rest, man is a physical derelict, a potential criminal. Peter was tired, he had lost sleep, when he betrayed Christ for the third time. It will be remembered that dawn was just breaking, for "while he yet spake, the cock crew, and the Lord turned and looked upon Peter."

DISCUSSION

DR. J. H. KELLOGG, Battle Creek: I can do little in discussing the paper except express my great appreciation of and admiration for the highly scholarly and very interesting address from Dr. Eastman. There is no question so interesting as the problem or how to save the human race. At the late Eugenic Congress held in New York, Dr. Davenport in his second address made the statement, which of course we all know, that the human race will ultimately perish, but there are ways in which we can do much to postpone that time. Dr. Darwin made the statement that if our present civilization survives it will have to be because the United States saves it, for there is no hope in any other part of the world.

The question is a serious one, what is the matter with the human race at present? Dr. Eastman calls attention to the fact that we are working too hard. Perhaps another phase should be considered. Perhaps it is not because we are working too hard, but because it is so hard to work, that we have less capacity for work. That is very evident. The great number of people fleeing from the country to the city to find an easy job is one evidence. They feel an innate incapacity for work. I remember as a boy we usually went to the store to do our trading at night, and we almost always found the store open until eleven o'clock. Now they are closed at six o'clock and the clerks have a half day holiday besides, but they get on just as well. Clerks are not able to work, not able to stand the labor required of them a number of years ago. They are constantly calling for shorter hours —first they wanted nine hours, then eight, and now they want six. There is something wrong with our civilization which is taking the vitality out of the race.

We are sending 260,000 lunatics to the asylums every year and there are probably as many still loose. Dr. Wilcox of Cornell University stated, after consideration, that if our birth rate continued to decrease in the year Two Thousand not a single baby would be born. This is going on all over the world. Dr. Osborn, after careful examination of the draft during the late war, found that the race has lost two and a half inches in stature since the Civil War. I have been particularly watching

the results of laboratory researches. I remember some years ago when the study of high protein diet was made. Dr. Crittendon had six college athletes and six professors under observation and found that by reducing the proteins there was an enormous increase in health and nutrition. He himself recovered from rheumatism and found his capacity for work greatly increased. I remember not long ago my good friend Dr. Abrams dined with us and after taking dinner he said, "Dr. Kellog, there was something wonderful about that dinner." I said, "What?" and he replied, "Why, I feel as well as I did before, but I usually have to rest three and a half hours after eating." I told him he did not get any protein for dinner, no beefsteak or eggs. He asked me if I was sure that made the difference and I told him I was sure. He then said he would try the experiment. Three months later I saw him again and he said he had eaten no beefsteak and felt fine. He continued this treatment and found his power to work considerably increased. Roosevelt said that a horse with a large man on his back could run a mile and a half. It was remarked when Firpo was defeated by Dempsey that it was probably due to two or three extra beefsteaks which he had eaten, while Dempsey ate lettuce and fruit. I remember at the time of the Nelson fight a headline in the paper said "the beefsteak did it," and Nelson confessed that he had swiped an extra beefsteak.

Another thing I think is neglect of the colon. If a man takes a great deal of protein and this decays in his colon the absorption in his colon makes him tired. I think this has much to do with our fatigue.

Other things possibly have some relation to our fatigue. Possibly the use of coffee has something to do with it. Coffee makes a man think he is not tired when he is, or it may make him think he is tired when he is not. He does not sleep as well as he would if he did not take coffee. He wakes up and feels tired and wants coffee. Some years ago Dr. Lombard at the University did not permit the boys to smoke when they were preparing for some contests. He made some experiments on muscular power and found that within five minutes the muscle power was decreased. He found that before smoking the maximum was seventy-five pounds while after smoking it was only fifteen, and the number of lifts that could be made was reduced from eighty-four to twelve by five minutes smoking. The muscles could not act properly and did not return to normal condition for several hours. Men complain a great deal about being tired, but what of people who do not work at all?

I think, Mr. Chairman, it is quite important in this question to make a careful study of habits. Another thing which seems to be important is to introduce into our educational system a more thorough consideration of the physical condition of the child. We should make the prime object of education to make the boy and girl good animals. Mr. Spencer said this many years ago. We must have first of all a good physical foundation, but instead of that we see almost no attention paid to the physique of the child.

I recall a business man from Boston whom I saw some years ago who was much exhausted. For three months we did our best to rest this man, but he was just as tired as ever, and finally went away without being much improved. Two or three years later he came back. In the meantime I had learned something of the splanchnic system of vessels. I had learned that they are capable of holding all the blood in the body. I made this man straighten up. He had been sitting in the usual slumped over position and I straightened him up and put on a belt. He went home and when I saw him three years later he told me he was perfectly well. As soon as we got him to straighten up and support his splanchnic vessels he improved.

I remember a college professor who consulted me several years ago who was tired all the time. He had consulted many physicians, but after talking with him for a few moments I told him I had discovered what his trouble was. He was much astonished and much disgusted when I told him he had a wrinkle in his stomach. He said he had none and if he had I would not know it because I had not seen his stomach. I made him undress and showed him the wrinkle. Then he asked me how I knew he had the wrinkle. I told him it was very simple, that he had a wrinkle in his vest and when he straightened up it did not straighten out, and that the blood he wanted in his head was down in his stomach where he did not want it. I gave him some exercises to straighten him up and in three weeks he wrote me that he was doing more work than in many years, and in three months he was doing as much as he ever did in his life. He has continued well and is convinced that the great thing is straightening his abdominal muscles.

I believe the greatest thing we need now is to get physical education into our public schools and get the students to obey the laws of physiology and of biology. Why should we not do this? I am sure it is the most important thing.

DR. W. T. DODGE, Big Rapids: We have listened to a very interesting discussion of this subject by Dr. Eastman and Dr. Kellogg, and I think there is not much more to be said. We are aware from Dr. Eastman that first we meet the injuries and fatigues that come along in early youth and as we reach the age of manhood we still continue to decline and to develop faults that come from increased activity and from increased effort to do more than we should do. He pointed out the condition of the Chinese, but I think very few of us would want to be Chinese. We may be willing to take what comes to us and go along progressing as we have been doing.

I think many things can be done along the lines mentioned by the methods of Dr. Kellogg, which he has been advocating for many years in this state. A while ago I spent some time at his sanitarium and while I was there I met a young woman who said she spent a month there every year. She had done this for many years. She lived in New York but said she found it a very good change and a good rest. I do not know how she lived the rest of the year, but during the month at the sanitarium she was observing all the rules, partaking of the diet prescribed and was apparently well.

We have a Senator from Michigan who was somewhat old when he was elected senator a year or so ago. I have been in somewhat familiar touch with his method of living for some thirty-four years. He has done a great deal of work. He has read a great many books. In fact, I think he has the largest library and the largest special set of books on the subject of psychology and psychological disease in the State of Michigan. He can read those books and obtain from them a great deal of knowledge contained within the covers within a very short time. He is about seventy-one years old and so far as I know is possessed of the utmost vitality and energy, and he has devoted a great deal of his time and energy to the cultivation of himself, his family and his associates. He has always been "tired" in the respect that some people use this term. I used to think he would die at a very youthful age, that he worked too hard and too much. Nevertheless he has continued in perfect health and I think a great deal of that has come about from the fact that he has had diver-

sified interests. As a teacher he was always going about the country and delivering talks and keeping up other interests. I think this has been a great help to him and I believe if we would devote a little more time to other pursuits than the one in which we are engaged, and in which we are making our living, it would be much better for us than to confine ourselves, as most doctors do, to our own life work.

I wish to express my appreciation to Dr. Eastman for the very fine address he has given us, and also to Dr. Kellogg for his discussion.

(No closing remarks from Dr. Eastman.

INFANTILE TETANY WITH REPORT OF A CASE*

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The term "spasmo philia" is frequently used interchangeably with the term tetany, but the tendency at present among many physicians is to apply the former term to those children who are predisposed to spasms or convulsions. The term tetany is restricted to the clinical entity which we will consider here. To be more exact "Infantile Tetany" is a better term and will distinguish this condition from "Gastric Tetany" which we will not consider.

Infantile tetany is described as a disease characterized by convulsions, carpo-pedal spasms, laryngo-spasms, and an extreme irritability of the nervous system to mechanical and electrical stimulation.

For years observers have noted the close association between rickets and tetany. At the present time, with the aid of the X-ray, it has been made quite clear that all cases of infantile tetany have rickets, but all patients with rickets do not have tetany.

The disease is rare during the first three months of life. I have seen it in a premature infant. It is found with greatest frequency during the latter half of the first and during the second year of life. There is also a marked seasonal variation in incidence; it being rare in summer and autumn, but very common in winter and early spring, especially during the months of February, March and April. It has been noted that it is more common in Italian and colored infants, due probably to their greater susceptibility to rickets.

Many theories have been advanced as to the cause. A great many writers attribute it to some predisposing factor, as the so-called "spasmo philic diathesis" and consider it a phase of the status thymico lymphaticus, but while it occurs in the pale "lymphoid" type of child, it occurs as frequently in other types of children. Heredity may play a part, and certainly feeding is an important factor. The artificially fed infants, and especially those fed exclusively upon cow's milk, furnish the largest number of active cases, but breast fed infants are not immune to the condition. Because of its seasonal incidence the following theory has been advanced:—tetany occurs mainly in the late winter and the early spring, as has been stated, or at a time immediately following that period of the year when the concentration of the actinic rays of the sun is low, and is cured spontaneously during the early summer. This fact has brought about the belief that rickets plus lack of sunlight results in tetany.

The main pathological finding is a deficiency of calcium in the blood serum. The calcium content of the brain in children dying from tetany is distinctly lower than normal. It has been shown experimentally that a deficiency of calcium in nervous tissues produces an increased irritability to electrical and mechanical stimulation, while an increased calcium decreases this irritability. The excellent researches of Howland and Marriott[1] seem to show convincingly that a reduction of the calcium content of the blood is the prime cause in the production of tetany. The actual factor which causes this loss is unknown. The normal calcium content of the blood serum is between 10 and 11 mg. per 100 cc. When the serum content sinks to 6 or 7 mg. of calcium per 100 cc. frank evidences of tetany appear. The symptoms continue active as long as the calcium content remains low and disappear when it rises to normal. We may conclude from this, then, that some food deficiency plus presence of rickets, plus lack of sunlight, in some unknown manner produces a deficiency of the calcium content of the blood serum which in turn produces an increased nervous irritability.

The symptoms of tetany may be divided into two groups: the manifest and the latent. The chief symptom of the manifest form is the carpo-pedal spasm. The upper extremities are almost invariably involved. The hands show the peculiar so-called "obstetrical position" wherein the thumb is drawn into the palm, the fingers adducted and flexed at the metacarpo-phalangeal articulations, but extended at the more distal joints, and the wrists flexed. Often, too, the forearm is flexed and the upper arm drawn to the body. The lower extremities are not always involved, but when they are, they show a flexion at the knee joint while

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the feet are held in a position of equino varus. There is often pain accompanying this chronic spasm causing the infant to cry out. Parasthesias may be present also. Another and very common manifest symptom is the laryngo-spasm giving the characteristic inspiratory "crow" in the milder form, and causing dyspnea, deep cyanosis and an anxious terrified expression combined with convulsive inspiratory efforts in a severe form. The characteristic crow is a pleasant sound, slightly resembling the "whoop" of pertussis, and may occasion much pride on the part of the parents, being looked upon as a mark of precocity. The crow may be induced by blowing in the infant's face, or it may be produced during crying. The severe form of the laryngo-spasm causes great concern on the part of attendants, and may well do so, as death is not at all uncommon during an attack. At times general convulsions may follow a severe attack. Any slight disturbance may precipitate an attack. It is always dangerous to make a throat examination in cases showing laryngo-spasm. A third manifest symptom is the so-called eclamptic state; this is characterized by convulsive seizures, not unlike the type of convulsions seen in epilepsy, and is frequently mistaken for that disease. The attack begins with a tonic form of convulsion, followed quickly by a clonic state. The spasm generally starts in the muscles of the eyes and face and then rapidly extends to the extremities. The breathing is laboured and may be accompanied by cyanosis. The spasm lasts only a short interval, consciousness returns almost immediately and the child may appear entirely normal after the attack. The seizures may occur at frequent intervals. The serum calcium content in cases showing convulsions is 7 mg. or below as a rule. This figure is called the convulsion level.

The latent stage of tetany is the one most frequently seen. These cases rarely come to the physician except when complicating some other condition and even then may be overlooked by him if he is not especially on the lookout for them. The crow or mild laryngo-spasm is included by many among the signs of latent tetany, but the signs commonly found are Chvostek's, Trousseau's, the peroneal and Erb's phenomenon. The Chvostek's sign is the most constant finding in these cases. In the absence of electrical apparatus and laboratory facilities for determining the calcium content of the blood serum, it is on this sign that the diagnosis is most frequently based. It is elicited by tapping the cheek over the superficial course of the facial nerve. In cases of tetany this is followed by lightning-like contractions of the facial muscles. It may extend to all three branches of the facial nerve, or may be limited to one or two. Most commonly the contraction is in the orbicularisoculi muscles, and is most frequently seen about the inner canthi of the eyes. The contractions may be well marked or so slight as to require very close observation for their detection. Slight contraction about the eye may be the only evidence of the condition present. Great care must be exercised not to mistake lip twitching induced by striking the muscle. Closely allied to the Chvostek is the peroneal sign which is elicited by tapping over the peroneal nerve on the lateral aspect of the leg, about midway between the ankle and knee. If positive, the foot is quickly everted. This sign is less frequently present than the Chvostek's. Trousseau's phenomena is elicited by firmly compressing the arm above the elbow with the hand or a rubber band sufficiently to cause a blanching of the distal part. When it is positive, the hand will assume the "obstetrical position" described before, or a tonic spasm of the digits will occur; this is the least constant sign. Erb's phenomena represents the hyper-excitibility of the peripheral nerves as determined by the use of the galvanic current. The contractions occur with the making and breaking of the current and are called "closing and opening" contractions respectively. The nerves react differently to the different poles also. For these determinations a galvanic battery with a milliamperemeter graduated in fifths up to ten or more milliamperes is necessary. The peroneal, the median or the radial nerve may be used. The large indifferent electrode is placed on the abdomen. The skin and electrodes should be moistened with saline. The electrodes should be of a definite size. Two observers are necessary; one to regulate the current and read the ammeter. and the other to make and break the current and note the contractions.

In the first six months of life, any contraction with a current of less than 5 milliamperes, except the cathodal closing contractions, points to tetany. (No evidence in regard to tetany can be drawn from the cathode closing contraction.) An opening contraction, either cathodal or anodal, with a current of less than 5 milliamperes, is positive evidence of tetany. Under two years of age an anodal opening contraction

with a current of less than 5 milliamperes, and an anodal opening contraction with less current than that which will cause an anodal closing contraction is presumptive evidence of tetany, an anodal opening contraction at ½, 1 or 2 milliamperes definitely indicates a latent tetany. Cathodal opening or cathodal closing tetanus with a current of less than five milliamperes in any child under 5 years is evidence of tetany.

The figure obtained may vary from day to day on the same case, and, also, may vary with different observers, so for these reasons, repeated determinations are necessary. The serum calcium in latent tetany is usually above 7 mg. The signs of latent tetany are present in manifest tetany also, but in a more marked degree. Frequently, however, they cannot be elicited during or following a convulsive seizure.

A latent tetany may at any time become manifest as the calcium content of the blood serum falls. Many latent cases suddenly become manifest in the presence of an acute infection, and a great many times the severe convulsions associated with acute upper respiratory infections and otitis media are due to this fact.

THE DIAGNOSIS OF TETANY

Any patient showing signs of rickets should be examined for signs of latent tetany especially during the winter and spring.

Tetany is the most common cause of convulsions in infants under two years of age. Complaints of "holding the breath," "crowing," inspiration difficulty, convulsions, twitchings and spasm of the digits should lead one to suspect this condition. The examiner should first search for signs of rickets, and if these are present, the probability of tetany is increased. The presence of Chvostek, peroneal or Trousseau's sign, or of any one of them, is good presumptive evidence, and where facilities for further studies are not available justify active treatment. In a case with convulsions, the absence of these signs does not exclude tetany for frequently they may be absent due, possibly, to nervous exhaustion, but may be elicited on a subsequent examination.

The electrical reactions, under favorable conditions, are diagnostic, but the most conclusive evidence is the finding of a reduced content of the blood serum. Tetanus is distinguished by the presence of stiffness of the neck and jaw muscles and is a rare infection in infancy. Cases of meningitis may resemble tetany especially if convulsions are present, and, indeed both conditions may occur simultaneously. Therefore, a lumbar puncture is advisable in cases showing convulsions. The spinal fluid in tetany is normal. The differentiation between epilepsy and tetany may require greater time and study. The type of seizures may be very similar, but a return to clear consciousness immediately after the convulsion points to tetany, and further evidence for it should be sought. The older the child, the greater chances in favor of epilepsy.

THE TREATMENT OF TETANY

Prophylaxis should be emphasized. Maternal nursing is one of the best preventives, but is not certain as rickets and tetany do occur in breast fed infants, especially in colored and Italian babies. Prevent rickets and you will prevent tetany. Cod liver oil, sunshine, and good hygiene are of greatest value.

To treat an established tetany, one must use measures that will increase the blood calcium rapidly and permanently. Temporary starvation, catharsis, and change from cow's milk to maternal milk have all been employed, but, at present, are usually considered accessory to more potent measures. The effect of cod liver oil with and without phosphorous has been more completely studied. Gradual, but rather slow improvement has been demonstrated by their use. The calcium concentration of the blood serum can be increased by the administration of calcium salts. The chloride of calcium is more effective than the lactate. This has been proved by Gamble and Ross[2] to be due to the unoxidizable chlorine iron (cl.) This is in agreement with the fact demonstrated by Scheer[3] that placing hydrochloric acid in the milk will cause the symptoms of infantile tetany to disapepar, and that ammonium chloride had a similar effect. Gamble and Ross have shown that the ingestion of calcium chloride, hydrochloric acid or ammonium chloride produces the same acid effect in the baby, this effect consisting of a reduction of the plasma bicarbonate, due directly to an increase in the chlorides and an elevation of the hydrogen ion concentration of the plasma. This reduction of the plasma bicarbonate and increase in the hydrogen ion concentration probably increases the ionized fraction of the total calcium content of the plasma, and this increase in effective calcium decreases the hyperirritability of the neuro-muscular apparatus.

The relief of tetany by the administration

of these hydro-chloric acid producing substances is rapid but of short duration, the symptoms returning very soon after the cessation of medication, so that some procedure leading to more permanent results should be used.

It is a recognized fact that even with continued cod liver oil and calcium therapy, the return of the serum calcium to a normal figure may be very slow, although the clinical findings of tetany may disappear fairly promptly.

The fact that the seasonal incidence of tetany indicated lack of sunlight as a causative factor led several men to investigate the effect of ultra-violet radiation on the disease, Kramer, Casparis and Howland[4], Sachs[5] and Hoag[6] have carefully investigated the effect of ultra violet irradiations on the calcium content of the blood serum and report an increase.

Hoag[6] reported a series of cases which shows uniformly good results with the use of the ultra-violet rays from an all mercury electrode, quartz encased burner and using 4 amperes on a 110 volt circuit. The trade name for this is the "Alpine Sun Lamp." The technic used was this:—The patients were exposed with the lamp at a uniform and unvarying distance of 50 cm. (20 in.) from the surface of the body. The initial dosage usually was two minutes to the front and two to the back of the body, giving a total of four minutes, and increased one minute to the front and one to the back daily unless contraindicated by erythema. Hoag did not exceed a maximum total exposure of 40 minutes daily.

The total length of exposure necessary to cause an increase of 1 mg. of calcium in 100 cc. of serum varied from 17 to 65 minutes with an average of 41 minutes. The symptoms of nervous irritability disappeared in from 4 to 8 days, and the average number of days under treatment was 14. He concludes:

"In eleven patients with infantile tetany, ultra-violet rays applied in amounts approaching the limit of tolerance, and unaccompanied by other treatment, caused a progressive and permanent relief of the clinical symptoms, paralleled by the return of the serum calcium concentration to an essentially normal figure. The rise was proportionately more rapid in the case having the lowest initial concentration of calcium."

In cases having severe symptoms as convulsions or laryngo-spasm, calcium chloride should be used to give quick relief to these distressing manifestations and ultra-violet irradiations begun at once as a permanent curative measure. The calcium chloride may be discontinued after a few light treatments have been given. After the serum has been brought up to its normal figure, the light may be discontinued, but cod liver oil should be given and other general measures instituted for the relief of the rickets underlying the tetany. If an ultra violet lamp is not available and sunlight used, it is well to remember that direct sunlight only is of value and that the beneficial rays are filtered out by passing through glass. This would render it necessary to place the infant out of doors with the entire body exposed to the sun, but climatic conditions render such a procedure impossible as a rule.

CASE REPORT

The following case is unusual in that it occurred as late in the season as July in such a severe form.

Baby F. B. was brought to the University Hospital, July 6, 1924, with the complaint of convulsions. He was 4½ months old and weighed 9 pounds. The family history was entirely negative. The patient was said to have been a few weeks premature, but delivery was normal and the birth weight 3½ pounds. He was breast fed for two months when the supply became insufficient, and supplementary feedings given for the third month. The maternal supply failed entirely so he was weaned and given cow's milk formula with dextri-maltose. He did fairly well, but was constipated and required castor oil and milk of magnesia at frequent intervals. No orange juice or cod liver oil had ever been given. His present illness began three days prior to entrance with a severe crying attack followed by convulsions. These were repeated every 30 to 50 minutes. The following day a physician was called and found that the patient had a temperature of 104F. He gave calomel by rectum. The convulsions recurred at less frequent intervals, every 2-3 hours, following the catharsis. The day before entrance, a second physician was called who prescribed chloral hydrate by rectum. This had little effect. Both physicians gave a fatal prognosis. On questioning the mother it was found that the baby had been kept indoors almost constantly since birth and had seldom been in the sunlight.

On physical examination, the child was seen to be fairly well developed, but poorly nourished, and did not appear to be acutely ill. The anterior fontanelle measured 4x5 inches in diameter and was not tense or bulging. The parietal bosses were very prominent and there was well marked craniotabes in the parietal and occipital regions. The eyes, ears and nose and throat were negative. There was no stiffness of the neck. The ribs showed a well marked rachitic rosary. The respirations were normal in character and examination of the heart and lungs was negative. The liver was felt 2 cm. below the costal margin. The spleen could not be palpated. There was a slight epiphyseal enlargement at the wrists, and a moderate bowing of the tibiae. The cervical and inguinal glands were palpable. The tendon reflexes were hyperactive. There was no Kernig's or Brudzinski's. Chevostek's sign was elicited but was confined to the upper eyelids on both sides. The peroneal sign was elicited but Trousseau's was not. Erb's sign gave the following results:

C.C.C.	A.C.C.	A.O.C.	C.O.C.
1.8 ma.	1.8 ma.	1.8 ma.	2.0 ma.

Lumbar puncture was done and a clear fluid obtained under normal pressure. There were three cells and no increase in globulin or albumin. The white blood count was 9,200; blood culture was negative and the temperature was normal. The serum calcium was 6.3 mg. per 100 cc's.

Treatment—Fifteen grains of calcium chloride were given by mouth three times daily and quartz light therapy was started at once. The exposures were made at a distance of 20 inches and the treatment given as outlined before. The calcium chloride was discontinued July 10, or three days after entrance. On July 15, after a total of 40 minutes of exposure to the quartz light, the serum calcium was found to be 11 mg. per 100 cc. The patient did not have any convulsions after entrance. The quartz light therapy was continued until July 31, when the patient was discharged from the hospital apparently recovered from his disease. His mother was instructed to give him one teaspoonful of codliver oil three times a day. He was seen one month after in the out-patient department, and during that interval he had gained 23 ounces in weight, was not at all irritable, and was apparently in excellent condition. The cranio tabes could not be demonstrated at this time. The mother reported that he slept very well, seldom cried, that his bowels were regular so that catharsis was no longer necessary.

This case illustrates very well the effect of quartz light therapy on infantile tetany. The very rapid rise in the serum calcium may have been due to the combination of the calcium therapy and the quartz light.

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HEMOLYTIC JAUNDICE

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Hemolytic jaundice is a disease of excessive blood destruction, with superabundance of microcytes. The red cells lack resisting power. By a process of fragmentation they become smaller and smaller, their disintegration resulting in the accumulation of large quantities of bilirubin in the blood, without bile salts. It is now believed that in the normal destruction of red blood cells in the body hemoglobin is liberated, and that bilirubin is formed from it as an end product. This bilirubin in the blood is known as normal bilirubinemia. In hemolytic jaundice there is an excessive amount of bilirubin in the blood—a hyperbilirubinemia—due to the increased rate of cell destruction. In a recent article by Bernheim a method of quantitiatively estimating bilirubinemia is described—a method that promises to become a valuable aid in the differential diagnosis of hemolytic bilirubinemia from the secondary anemias.

Hemolytic jaundice appears in two forms, congenital and acquired. Murchison in 1885 reported different members of the same families suffering from hereditary jaundice without enlargement of the liver or spleen, but without data as to the blood condition. From the clear history he gives of these cases he must have had the hemolytic form of jaundice in mind.

The first clear description of the syndrome of hemolytic jaundice is by Wilson, of England, who reported his observations on six members of one family, representing three generations. Three years later he described his autopsic findings and microscopic examinations of the spleen, liver, pancreas, and lymphatic glands. In 1898, Hayem described five similar cases, not hereditary, of enlargement of the liver and spleen, with disturbances of digestion accompanied by anemia, which latter condition attained a high degree of severity. In 1900, Minkowski observed an hereditary affection resembling a chronic jaundice, with urobilinuria, splenomegalia and siderosis of the kidneys, in eight members of a family—three generations. In 1907 Chauffard proved that the congenital form of hemolytic jaundice is accompanied by a diminution of the resistance of the red corpuscles to sodium chloride. This is called "globular fragility," a condition which is never found in diseases of the liver or bile ducts.

The subjective symptoms in hemolytic jaundice are really due to the anemia. The patients complain of irregularity of the heart, dizziness, and general weakness. In some cases they have attacks of colic that seem to be of biliary origin. Then again, there may be disturbances that seem to be referable to the gastro-intestinal tract. The symptoms are not constant, and periods of good feeling may alternate with bad. Very often there are pains in the region of the spleen. In contrast with the usual form of jaundice, hemolytic jaundice is not attended by irritation of the skin and the sensation of itching. The disease occurs in all stages of life and attacks both sexes equally.

In the majority of patients there is a marked paleness of the skin and of the visible mucous membranes, which vary as to their severity. They are all noticeably icteric, and the predominating color is gold or canary yellow. The pigmentation is not as pronounced as in cases of obstructive jaundice, nor as dark as in cirrhosis of the liver or bronze-diabetes. It varies with physical exertion. Hemorrhages occur, especially from the nose, sometimes from the gums, the palate, or the inner surface of the cheeks. No exanthematous changes of the

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skin occur, as in other forms of jaundice. There is no fever, neither is there any essential change in the thoracic organs. There are, however, slight systolic murmurs over the heart at the apex and the base, without increase of the second sound. There is no bradycardia. The liver may be enlarged, but not necessarily so. Along with the intensification of the subjective condition and the poverty of the blood, there is also an increase in the size of the spleen. Sometimes also a perisplenitis occurs.

The feces are usually darker than normal; the masses are very large and contain no urobilinogen, but the urobilin content is high. The excretion of cholesterol in the feces is larger than normal. The urine contains a very decided percentage of urobilinogen, and though urobilin is frequently present it is not always. When the disease becomes aggravated, the urobilinuria as well as the bilirubinuria becomes worse. The excretion of urea and phosphates in the urine is not increased. The liver seems to function normally.

The red corpuscles, as a rule, are very much reduced in number, the average being from one and a half million to three million. In the acquired form and in advanced stages of the disease the oligocythemia attains a higher degree. In general the hemoglobin value corresponds to the number of red corpuscles. Frequently the color index is high, especially in stages of exacerbation. The red corpuscles, especially in the hereditary form, show a characteristic condition of anisocytosis. Polychromatophil erythrocytes occur very frequently. Nucleated red cells which are strongly polychromatic are sometimes found. There are also erythrocytes with Howell-Jolly bodies. The percentage of reticulated red cells is increased in hemolytic jaundice, while this condition has not been observed in obstructive jaundice. The number of white corpuscles is usually normal and rarely reduced. The polymorphonuclear neutrophilic leukocytes increase and the myelocytes appear decidedly increased in the acquired form. There is also an increase of the mast cells—important because it indicates increased activity of the bone marrow. As to blood platelets, some observers maintain that they are reduced in number and some that they increase in cases of improvement.

The reduction in osmotic resistance of the erythrocytes to common salt solutions in all cases of hemolytic jaundice has been established and is the most important sign, as well as pathognomonic of the disease. In determining the beginning as well as the completion of hemolysis the technique is based on observation of the conduct of the red corpuscles with regard to graded solutions of sodium chloride. Normally the minimal resistance, in terms of hypotonic salt solution, is about 0.4 per cent. In congenital hemolytic jaundice the increased fragility is demonstrable in both the whole blood and the washed corpuscles, while in acquired hemolytic jaundice it is exhibited when washed corpuscles are employed.

Lysins and agglutinins are present, but autolysins and isolysins are not always found in the blood serum. It must not be forgotten, however, that isolysin is present in various diseases, as well as in health. Auto-agglutination of the red blood-corpuscles is considered characteristic of acquired hemolytic jaundice. If a drop of washed normal red corpuscles be added to ten drops of the serum of the patient, agglutination occurs within a few moments.

Chemical investigation shows that the blood serum, which is sometimes yellow-brown or even greenish, always contains biliary pigment in the form of bilirubin. There are two forms of bilirubinemia to be distinguished; one form depends on bilirubin being found in the blood serum as well as in the bile—these are cases of obstructive jaundice; and in the other form it is found only in the blood—cases of nonobstructive jaundice. In obstructive jaundice the blood serum gives a quick and complete diazo-reaction to bilirubin, while in nonobstructive jaundice if there is any reaction of the hemolysed bilirubin it is slow in making its appearance. Addition of alcohol in the first instance breaks down a considerable part of the biliary pigment, with precipitation of albumin colored yellow. In the other case there is little precipitate, sometimes none at all. The variation in the bilirubin finding is a good criterion for determining the severity of the blood disintegration. Urobilin in the urine, feces and duodenum is high and always occurs in the blood-serum of hemolytic jaundice—in the hereditary as well as in the acquired form.

Dry residue and protein of the erythrocytes and the albuminous content of the blood-serum are normal in hemolytic jaundice. The reduction of erythrocytic resistance and the agglutinating action of cholesterol have no connection. There is less cholesterol than normal in the organs. The total fat and the lecithin in the spleen are less than in the normal spleen, but there is a higher percentage of total cholesterol in the fat of the spleen of hemolytic jaundice patients than in the normal spleen.

The course and duration of the disease in the hereditary form is on the whole harmless and does not imperil life. In the acquired form it is different. The disease sometimes starts with an acute fever, and patients complain frequently of pains in the abdomen, especially in the region of the spleen. With the increase in the severity of the subjective complaints

there is an intensification of the objective condition. Then again long continued remissions may occur.

In the hereditary form the spleen is very much enlarged, the capsule and trabeculae exceedingly thick; the tissues are loaded with blood corpuscles and exhibit irregular spots, probably due to small hemorrhages. The connective tissue is abnormally thick. The malphighian bodies seem reduced, and some seem indurated; the central artery in these is obliterated; the lumen in less advanced cases is narrow and the walls are thickened. There is no pigment about the malpighian bodies. Occasionally there are precipitates of a gold-brown color in the interstices of the reticulum. There is no evident increase of connective tissue or enlargement of the capillaries of the liver. Only a few of the liver cells are modified.

We find the pathogenesis of hemolytic jaundice in the reticulo-endothelial system which is made up of Kupffer cells. The Kupffer cells form not only the capillaries of the portal circulation in the liver but also the lining of the venous sinuses in the spleen, in the hemolymph glands, in the bone marrow, in the suprarenals, in the alveoli of the lungs, and in the subcutaneous tissues of the body. These cells are also called clasmatocytes or histocytes. They have a great affinity for iron, and it is now believed that they have everything to do with the formation of bilirubin and that the liver itself functions as an excretory organ for this substance. Since the reticulo-endothelial system and the Kupffer cells elaborate the bilirubin found in the blood in hemolytic jaundice, it is of great advantage to have a test for the finding of this definite bilirubin. The van den Bergh test does this very thing and we find the bilirubin in hemolytic jaundice as the delayed-direct reaction. This is due to the fact that the bilirubin derived from extrahepatic sources exists in protein combination and is broken up gradually in the diazo-reaction. The recognition of latent forms of hemolytic jaundice is now possible through the van den Bergh method.

A variety of theories have been presented as to the pathology of hemolytic jaundice. It may be accounted for on the theory of a primary liver or bile-duct change or of a primary reduction of the erythrocytes or the erythroblast apparatus. Another theory treats of a pathologic alteration in the function of the spleen and in the co-operation of various organs. The change of hemoglobin into bilirubin takes place in the blood current; we may therefore say that the disease is a hematogenous jaundice. There is also the theory of congenital abnormality or insufficient development of the bone marow, recognizable in the reduction in the number of the red blood-corpuscles.

The primary condition seems to be a functional change of the spleen; then follows the destruction of the red blood-corpuscles, and then anemia and jaundice. This is the theory of the splenic origin of the jaundice. Splenic douches, splenic massage, Roentgen-ray treatment of the spleen reduce the resistance of the erythrocytes. In hemolytic jaundice the function of the splenic cells is so deranged that over-destruction of erythrocytes results, while in pernicious anemia there is an over-activity of all the reticulo-endothelial cells, with a somewhat similar result. In twenty of thirty-two splenectomies performed by the Mayos, bile-pigment and gallstones were present. They believe the stones are to e attributed to the enormous amount of pigment derived fro mteh excessive red blood-cell destruction in the spleen.

The disease of the spleen shows itself in three directions. First, it excretes into the circulation the substances which injure the red corpuscles; secondly, a part of the reticulo-endothelial processes is diseased; and, finally, the pathologic spleen exhibits a spodogenous tumor. Thus we account for the immediate beneficial result of splenectomy in this disease. Splenectomy, as a rule, does not seem to disturb the mechanism of the physiologic process. There is an antagonism, however, between the spleen and the thyroid with respect to the formation of the blood. Inasmuch as the thyroid is the excitant and the spleen the inhibitant, the co-operation of the two regulates the normal function of the blood-forming apparatus. The spleen plays a role in the formation of the hyperbilirubin in hemolytic jaundice, forming bile pigment out of destroyed blood corpuscles.

Previous infections are involved in acquired hemolytic jaundice, as occurs in both hereditary and acquired syphilis. There may also be some relation to tuberculosis. A marked tuberculous skin reaction will frequently aggravate the pain, the splenic enlargement, the jaundice and the hemolysis. Pneumonia, typhoid fever and gastro-intestinal infections of various kinds, as well as rheumatoid arthritis, seem to be associated with the disease. It may also occur in cases of ankylostomiasis and ascaridiasis. The hemolytic activity of the spleen may be increased through any accidental infection.

We find that there is a characteristic anatomic condition in acquired hemolytic jaundice, and the good results following splenectomy offer a safe pathogenic basis. The globular fragility is a cardinal objective symptom in this disease, and therefore ex-

amination of the red blood-corpuscles, resistance is most important.

The blood picture in hemolytic jaundice resembles that of pernicious anemia. We have in pernicious anemia the same morphological blood condition and the same defective osmotic resistance of the erythrocytes, as well as the same condition of the spleen, as in hemolytic anemia. The enlarged spleen, with diminished resistance of the erythrocytes, shows histologically in acquired hemolytic jaundice. The boundary line between pernicious anemia and hemolytic jaundice cannot be sharply drawn. The differential diagnosis is difficult and often impossible. Weber reports a case of acquired chronic hemolytic jaundice which he first saw fifteen years ago with a blood-picture then resembling that of pernicious anemia. There is a marked increase in the percentage of reticulated red cells in both congenital and acquired hemolytic jaundice, which is not the case in pernicious anemia. Chronic malaria which is marked by splenic tumor, anemia and jaundice, is occasionally mistaken for hemolytic jaundice.

Every method of treatment should take into account the etiologic factors. We find that in some cases of hemolytic jaundice, tuberculosis is an etiologic factor; the treatment should accordingly deal with the basic trouble. The same principle applies when syphilis plays an etiologic role. It is also obvious that in cases of hookworm and other intestinal parasites the treatment must be related to the etiology. The internal treatment of hemolytic jaundice is directed to the condition of the blood-iron, arsenic, climatic changes, and regulation of the intestinal function. Colloidal silver is beneficial in some cases.

Surgical intervention is, in a certain sense, etiologic therapy. The operation of splenectomy is usually successful in bringing about recovery. The immediate effect of splenectomy is quite marked, and recovery is prompt. If, however, the entire pathologic reticulo-endothelial process has not been removed with the spleen, a recurrence of the disease takes place. Splenectomy is indicated only after every internal means has failed and when other means are no longer useful, or acute conditions demand instant attention which may be directly life-saving. The application of the Roentgen-ray to the spleen may be of great benefit in hemolytic jaundice. Its use in this disease is a question of technique. Properly done, though a relapse should occur, this may be only transient and obliteration of the parenchyma ensue, with effects not unlike those of splenectomy. In this way by an improved technique the surgical operation may be avoided.

Wilkie says that in the congenital and familial forms of hemolytic jaundice surgery is seldom indicated, as the patients may lead normal lives and live to a good age. He states that splenectomy is advised only when the jaundice is of the acquired form. This statement does not coincide with the findings of Hatteson, who reports the history of the Roschmann family. The father and six of the members of his family had hemolytic jaundice, which was arrested completely in all by splenectomy. Recent reexamination of this family showed that eleven of the twenty-six members of three generations of the family presented the familial taint. The splenectomy in the mother did not prevent the development of hemolytic jaundice in the child born nine years later. Hemolytic jaundice can be transmitted by either sex to either sex. The results of splenectomy point to the spleen as the organ responsible for the hemolytic tendency and indirectly for the jaundice. The splenectomy removes at one stroke the greater part of the reticulo-endothelial apparatus.

DISCUSSION

DR. L. M. WARFIELD, Ann Arbor: This question of Hemolytic Jaundice has always been a tremendously interesting one to me. We divided them into hepatogenous and hematogenous. We also find bilirubin in the blood stream in hepatogenous jaundice and yet in the former there is bilirubin in the urine and in the latter there is not. Of course the explanation is in the hematogenous jaundice the bilirubin does not go through to the urine. In one form it does get into the urine. It is a very interesting and very peculiar thing.

I think one of the recent and also very interesting observations made is that bile pigment is not made in the liver at all. The bile pigment is selected by the liver cells but bile is made wherever there are these reticular cells, and that is all over the body.

It is interesting that the fragility of the red blood cells is very apt to be markedly decreased. That is to say, that whereas cells would go to pieces, would hemolyze at from 5/10 per cent to 42/100 per cent, after splenectomy the cells would not hemolyze at 3/10 per cent. And yet, shortly afterwards, the cells come back to their original fragility. It does not seem permanently to interfere with the fragility of the red cells, which the doctor has rigidly said is one pathognomonic sign of the disease.

All the cases I have had have had splenectomy and, so far as I know, my longest case is ten years and she is perfectly well. I was rather surprised to hear him say one should be careful about splenectomy. I always heard that these cases of large spleen should not be ruthlessly destroyed by the surgeon, but I feel that splenectomy is really the operation indicated and that surgery here is the treatment and not medicine.

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OBSTETRICAL ANALGESIA AND ANESTHESIA—AN EVALUATION OF VARIOUS METHODS*

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A satisfactory relief of pain in labor is usually possible. It requires a careful study of the individual case and the adaptation of various methods to the needs of the woman during the three stages of labor. Standardization is desirable, but impracticable except in so far as a general plan may be followed. Here as in other surgical work, teamwork is essential to success.

Labor always varies to some extent. Normally there should be little or no pain until near the end of the first stage, and therefore, these is no occasion for the use of any anesthetic agent. But a considerable percentage of women suffer real pain during the period of cervical dilation and relief means hypodermic medication. The dosage must vary with the type and frequency of the pains. Heroin Grs. 1/12 or morphine Grs. 1/6 and hyoscin Grs. 1/100 is prepared in the syringe. If early in labor with pain moderate and contractions short, only half of the dose is injected, the rest being given when needed. A severe labor requires the full dose and must occasionally be supplemented by an inhalation anesthetic.

We have used this type of hypodermic medication in over 200 deliveries without observing any of the untoward effects on the patient sometimes charged to small doses of hyoscin. In a small percentage of cases some difficulty in resuscitation was noted, but these babies had been subjected to considerable birth pressure and had shown circulatory signs of asphyxiation before birth. With the exception of one case with premature separation of the placenta a living baby has been obtained in every case where hypodermic medication was used during the first stage of labor.

Inhalation anesthetics may be administered intermittently for long periods of time. One of us has on several occasions used nitrous oxid for as long as fifteen hours. Protheroe Smith used chloroform analgesia for as long as twenty-eight and one-half hours and Simpson gave it in at least one case more than thirteen hours. Never-the-less, it is our present practice to avoid inhalation anesthetics in so far as possible during the first stage of labor.

Recognizing that the combination of an opiate with hyoscin may interfere with respiratory efforts we aim to avoid the use of hypodermic medication within the last three hours of labor. It is our impression that morphine is more apt to cause trouble, hence the choice of heroin.

Late in the first stage or early in the second stage of labor the patient is taken to the delivery room and an inhalation anesthetic started. Nitrous oxide-oxygen analgesia is usually employed. Ether is added to the mixture when indicated by protracted or too frequent contractions. In case of a tetanic labor ether is the anesthetic of choice.. It shortens the duration of the contraction and increases the interval, thereby lessening the possibility of fetal asphyxia. Ethlyene-oxygen possesses many of the relaxing virtues of ether and may be used during this type of labor. We have eliminated chloroform from our list of obstetrical anesthetics for reasons stated in other papers.

The technic of administering an obstetrical analgesic is simple—being based on the principle of "beating the pain to it." A sufficient quantity of gas or ether must be inhaled early in the contraction to produce analgesia or the patient will experience pain and carry the memory of it even though she is anesthetised during the latter part of the contraction. Success or failure in administering an obstetrical analgesia hinges on an appreciation of this point. Many expert surgical anesthetists are complete failures in a delivery room through their deliberate movements. The patient should get the anesthetic with the first inspiration after a contraction starts. It should be continued for a sufficient number of inhalations to relieve the pain of that contraction. The number varies with the individual susceptability and the type and duration of the contraction, as well as the anesthetic employed.

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Nitrous oxide produces a quick result and is soon eliminated. Ether tends to accumulate in the blood and when used for several minutes has a more lasting analgesia. Eehylene is more powerful than nitrous oxide and fewer inhalations are required when it is used. In a limited experience it has seemed to us that this new gas acts much like ether in its tendency to shorten the contraction and lengthen the interval.

The anesthetic is administered continuously during the delivery of the head. The patient should be unconscious at this time. Expulsive efforts are replaced by Kristellar maneuvere, pressure on the fundus. As soon as the head is delivered the patient is given pure oxygen and this is continued until the cord is tied.

Perineal repair may be accomplished satisfactorily with any of the inhalation anesthetics. There is no objection to the use of ether at this time if pituitrin is used to contract the uterus. It is generally recognized that the uterine relaxation obtained when ether is administered increases the loss of blood. Conservation of blood during a delivery lessens the chance of sepsis and undoubtedly makes a smoother puerperium.

Nitrous oxide and oxygen may be administered for all operative deliveries with the exception of version. During a version complete relaxation is essential to safety and ethylene oxygen or ether is required. The ether may be given in combination with either of the gases. For many forcep deliveries we administer the gas intermittently just as with normal labor and have the patient bear down when traction is made on the forceps. During the past five years we have delivered with forceps over 200 private patients without the loss of a single baby during birth. In two consultation cases seen late in labor the babies did not survive. One had a moderate hydrocephalus and the other should have been delivered early by Caesarean section. No baby was seriously injured and only two died during the early weeks of life. One of these was prematurely delivered after vaginal hysterotomy for partial separation of the placenta and the other had hemorrhagic disease. Possibly forceps delivery was a contributing factor in the latter case.

Success in the use of forceps is dependent largely on the use of the instruments to guide the head rather than pull it. We never aim to use more than a few pounds traction, and try to accomplish the delivery through Kristellar pressure and the expulsive efforts of the patient. We believe that a gas is more adaptable to this technic than ether because of the rapidity with which the depth of analgesia or anesthesia may be varied.

Ethylene is still in the experimental stage. Its explosibility appears to be its main limitation. It is being used successfully on the obstetrical service at the Presbyterian Hospital and from their experience it would appear to be better than nitrous oxid as an obstetrical analgesic. A quicker result is obtained and the analgesia persists longer. Fewer inhalations are required and therefore the anesthetist will less often fail through slow administration.

Our experience with ethylene in obstetrics has been limited to a few cases, and these did not lead us to believe it superior to nitrous oxide for obstetrical analgesia. However, we have attempted to evaluate this new gas anesthetic by repeating with it some of the animal experiments performed in 1917 by one of us in which chloroform-air, chloroform oxygen, ether-air, and nitrous oxide-oxygen were administered to groups of pregnant and non-pregnant animals. The same anesthetic chamber was used and other conditions were similar. The results are briefly as follows:

1. Eleven guinea pigs and three rabbits were anesthetised for periods varying from one to five hours.

2. An even anesthesia is more easily obtained with ethylene-oxygen than with nitrous oxide-oxygen.

3. No animal in either group went bad during the anesthetic. This is a common occurrence during attempts to keep a group of guinea pigs or rabbits under moderately deep nitrous oxide-oxygen anesthesia and an occasional animal will suddenly die.

4. It is apparently possible to asphyxiate the young in utero by giving too small a percentage of oxygen with ethylene. This is constantly true with prolonged deep nitrous oxid-oxygen anesthesia. The advantage here is with ethylene since anesthesia may be obtained without reducing oxygen below 20 per cent.

5. Tissue changes following ethylene are suggestive of slight cell edema. No evidence of fatty changes or cell destruction were found.

So far as it is possible to judge from a comparison of animal experiments with these four inhalation anesthetics ethylene-oxygen would be the most desirable for use during pregnancy or labor. Owing to the possible risk from explosions we have not used it during the past six months. We believe that with precautions being introduced

that the risk of ethylene explosions may be reduced to that of combinations containing ether and oxygen. If this is accomplished ethylene may in time supplant nitrous oxid in the delivery room as well as it will ether for major surgery.

CONCLUSIONS

1. Hypodermic medication is indicated for a painful first stage of labor. Heroin Grs. 1/12 or morphine Grs. 1/6 and hyoscin Grs. 1/100 is the usual dose, this being administered in two parts if the pain is not severe. A long first stage requires additional hypodermics.

2. Nitrous oxid-oxygen is still the analgesic of choice during the second stage of normal. A tetanic labor requires a more powerful anesthetic and ether is used. Ethylene-oxygen in smaller amounts may be used in place of nitrous oxide-oxygen, its explosibility being the main objection.

3. A patient must receive enough anesthetic to produce analgesia before a given contraction reaches the painful phase. This requires very prompt administration after the first suggestion of an approaching contraction. Failure to relieve pain is more the fault of the anesthetist than the anesthetic.

4. Each case must be individualized. Adapt the anesthetic to the patient's needs at different stages of labor. Version requires complete relaxation. Forceps delivery may be accomplished with analgesia or light anesthesia.

5. Anesthesia may contribute to fetal asphyxiation but birth pressure is to a much greater extent responsible. Sudden or marked changes in the fetal heart rate should serve as a warning. The fetal heart should be taken every few minutes during the perineal portion of labor and evidence of fetal asphyxia should lead to a prompt delivery.

6. Women are now expecting to suffer little or none during labor and as a result are much harder to please than those delivered ten or more years ago. Pain relief has relieved hospitals from the undesirable noise of obstetrical patients, and has made childbirth a less hideous procedure. The future will bring even more satisfactory methods.

DISCUSSION

DR. H. A. PEARSE, Detroit—In our service at Harper Hospital we have not been able with nitrous-oxid anesthesia to obtain the relaxation referred to in the paper. We do not have a regularly appointed anesthetist, the anesthetic being administered by different persons. In the few cases in which we have used the ethylene-oxygen anesthesia the relaxation is very good and we have noted the results mentioned by the authors of the paper. With nitrous oxid-oxygen anesthesia we have been unable to repair perineums and have the patient well relaxed. Whether this is due to the anesthetist or not I am unable to say.

As to the results obtained under ether anesthesia, the men working in the clinic seem to like ether better than either of the gases. Ether given early in the contraction will relieve the pain and the patient's expulsive efforts are practically unaffected.

Ethylene-oxygen anesthesia has given very good results. With it we have been able to repair an episiotomy due to forceps delivery with practical ease . We have been unable to do that with the patient under nitrous oxid-oxygen anesthesia.

DR. A. E. CATHERWOOD, Detroit—I have practically had Dr. Pearse's experience. So many times in delivering primipara, on whom we do episiotomy in such a large per centage of cases, I have been unable to obtain proper relaxation for perineal repair with nitrous oxid and oxygen. While I have had ethylene administered on only a few occasions, I have had excellent results in those cases. I do not like nitrous oxid in those cases in which we are going to do perineal repair following episiotomy, because I refuse to chase the patient all over the room in order to put in a few sutures.

DR. F. K. LENFESTEY, Mt. Clemens—I wish to speak from this viewpoint. "What are we going to do with anesthetics in the home?" I must say that I am ignorant, probably not following the literature, but what is Dr. Cron's particular objection to chloroform anesthesia? I have used it exclusively and have yet to see poor results. We cannot take all our patients to the hospital. What are we going to do in the home? Very often in the country we do not have the assistance that is available in the hospital.

DR. G. VAN AMBER BROWN, Detroit—I have been making an extensive study of the pathology of the fetus, paying particular attention to the kidneys, and in doing this work I ran upon a very interesting pair of twins that were delivered by Caesarean section. They lived only a few minutes after they were born. One of these fetuses was a little scrawny, illy nourished boy. The other was a bulky fetus of less than six months, and very edomatous, the face, arms and legs intensely swollen. We were at a loss to know why one child was so illy nourished and the other so well developed and having this edema. On making a study of that case we found that we were dealing with an imperforate urethra, which proved to be true not only macroscopically, but microscopically. There was fluid in the bladder, the uterus and kidneys were dilated with fluid. With a hypodermic we extracted the fluid from the bladder and found upon laboratory study that it had all the characteristics of urine. And this child had died from retention of its own urinary products. This was a little link in the chain to show that quite early in fetal life the kidneys do function. Then we conceived the idea that we would like to know how much the kidneys functioned, how well they worked, what dyes, if any, they would carry, etc. So we administered several dyes to mothers in order to determine, if possible, whether or not we could obtain the dyes in the urine. While carrying out this experiment I met the head of the obstetrics department in the largest lying-in hospital in Detroit and talked with him, and he never believed in giving atropin or hyoscin while the mother was in labor because it might kill the baby. I then talked with the head of the obstetrical department of another hospital, and he stated that he never used morphin, but always hyoscin, and that they had never had any trouble. We took

women either in labor or two or three days before labor and tried them out with indigo carmin, then observed the babies during a period of from 24 to 48 hours, and never could we obtain the least evidence that any of the dye had reached the infant. We then tried other dyes, with the same results. Finally a woman came along who for seventeen years had been a morphin addict and still ate about 20 grains a day, and we wondered what kind of an infant we would get. She gave birth to a baby weighing six pounds, active and healthy. She continued with the use of morphin, the baby was put to the breast, went into a stupor and died. It got morphin from the breast of the mother, but did not get it through the circulation of the blood. I have taken time to relate this case at some length in order to illustrate that we do not need to be afraid of morphin or hyoscin or atrophin being carried to the child by giving hypodermics to the mother while in labor.

I wish to defend the use of chloroform. It takes a midplace between ether, the anesthesia from which is too prolonged, and the gases, which are too transitory in their effect, and we can easily put the patient under the influence of chloroform. If we use our intelligence to help us while she is in labor she is more rapidly brought to consciousness, you can get all the relaxation you want, and, whatever accidents you may have in surgical anesthesia, those events do not occur in obstetrics. We do not get heart failure. Last week in Buffalo I attended the Clinic of Potter, who uses chloroform entirely whether in the hospital or home. Last week he delivered forty women, he uses chloroform and has had but one death which anybody could possibly attribute to the use of the anesthetic, and even that he thinks was not due to the chloroform.

DR. L. W. HAYNES, Detroit—I agree with Dr. Cron as to chloroform. I think it has no place in obstetrics. I have used it, and did use it for many years when I was doing a lot of obstetrics in the home, and there is no doubt but that it is an easy anesthesia to employ. But, unfortunately, I ran up against a case of death from chloroform. Many others have had the same experience, and after you have seen a patient die under chloroform I think you will eliminate it and try something else.

Regarding ether, I started using it when I gave up chloroform and I believe it is just as easy to handle in an obstetrical case as chloroform. You do not get as quick result, but if you start at the proper time and work it out you will find that it will take care of the contractions just as well, and it is safe to give.

Relative to the newer anesthesias, although I deliver practically all my cases in the hospital where we have trained anesthetists, and although I have tried out nitrous oxid and the ethylene-oxygen, I must say I have not been very well pleased with any of them. Those of you who were at the meeting two years ago and heard Dr. Shannon, who was our chief anesthetist at Harvard, must have felt as though you would give up all the rest and start using nitrous oxid, and I believe I should feel that way if I could have Dr. Shannon give all my anesthetics. Personally, I believe that the old reliable ether is hard to beat.

DR. E. WILBUR CASTER, Detroit—I want to emphasize the statement that one trouble is in the anesthetist rather than in the anesthetic. I think the way the anesthetic is given makes all the difference between a good and a poor anesthesia. About eight years ago my sister, who had been a school teacher, took a course in anesthetics. I think without any exception she was the best anesthetist I ever had experience with, and a number of doctors said the same. She was with me for some time giving anesthetics, and particularly in obstetrics. And my experience was that if nitrous oxid and oxygen is used as it should be it is an excellent anesthetic. Unfortunately my sister died, and I never could get anybody to take her place.

It has been my custom to give pure nitrous oxid. It is not my intention to use any oxygen more than once in a dozen cases. If we administer it early, it is a wonderful thing. Sometimes you cannot get the patient to consent to this, when it does not work out so successfully, but almost to the point of delivery it is a wonderful anesthetic even in the hands of an inexperienced person. I find that it does not take away the pain during delivery as well as it would if I had a trained anesthetist because I do not dare allow the patient to take as much. In the hands of an experienced person I think it would be a wonderful thing. It is a great help in the house delivery of patients.

DR. G. G. HICKS, Jackson—In regard to the effect of chloroform and ether on pituitrin, I believe it puts the grips on it very effectively. In giving pituitrin I always use chloroform. The manufacturers claimed that I did not get the action of the drug as well as did some surgeons. They told me to use about half the strength and I need not be afraid of it. I find that the effect of pituitrin is gone within thirty minutes. It works very effectively.

DR. CRON—Just one point in closing. Chloroform should have no place in obstetrics because of the dangers associated with it. For instance, when chloroform was given to pregnant guinea-pigs it was found that the liver cells of the young were absolutely destroyed and were replaced by fat. It is entirely different with ether or ethylene or nitrous oxid. With those gases the only change in the cell is slight cell edema, which will always repair itself. I have sections of liver taken from women who died from chloroform poisoning, which show the same marked fatty destruction.

In regard to Dr. Catherwood's remark as to the value of nitrous oxid in doing episiotomy repair, we have used with this anesthetic about two per cent of ether. The ether container is attached to the Clark or any other of the gas machines so that the ether can be added to the gas. That is the agent which induces relaxation. There are a few experienced anesthetists who are able to get fairly good relaxation from nitrous oxid, but they have to be well trained.

It is my opinion that the action of pituitrin is not influenced by the anesthetic. It is our rule, whether ether, ethylene or nitrous oxid is used, to administer pituitrin to the mother immediately after birth of the child, giving about one-half c.c. of the obstetrical pituitrin. In the vast majority of cases pituitrin definitely reduces the amount of blood loss during the third stage of labor.

ADVANCED CANCER OF THE CERVIX TREATED WITH HEAT AND "STARVATION LIGATURE"*

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Heat is a primary and fundamentally selective antagonist of the cancer cell. Carcinoma is more vulnerable to the application of heat than to any other known agent. It is a "time

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immemorial fact," that high degrees of heat retard malignant growths on the surface of the body. Five hundred years ago, Guy de Cheulic, the most highly educated surgeon of his time, though he used the knife in cutting out cancer at an early stage, recommended and used in growths, particularly of the fungus type, the actual cautery. The electro-cautery introduced by Middledorpf, was then considered by many surgeons preferable to any other method in the treatment of cancer of the cervix, it was later adopted by John Byrne, and finally came to be known as the "Byrne," method. He reported over 60 per cent of his cases alive and well beyond the five year period, and no one has ever called in question the correctness of his statistics.

In recent years G. Betton-Massey commenting upon the work of Dr. Byrne says, he is too little known as a member of the Royal Chirurgical Society of Edinboro, former president of the American Gynecological Society, and author of the section on Electro-thermal surgery in the Bigelow-Massey International System of Electro-therapeutics, and adds, "It is a sad comment on contemporary surgery, and its tendency to a blind adherance to prevailing fashions, that the radical teachings of this forceful man were absolutely neglected during his life."

One difficulty with heat in the treatment of cancer has always been a lack in knowledge of how most effectively to obtain from its employment the maximum benefits. At present there are two methods by which heat can be applied effectively to cancer invaded tissues; one, the cautery, the more familiar procedures with which are the basis for whatever recognition it has received in the past in the treatment of this disease, the other is the method under discussion in this paper, the continuous application of low degrees of heat, temperature to be continued for hours or days at a point less than required to produce actual cauterization of tissues. It is particularly applicable to treatment of carcinoma of the cervix. The heat should be so applied as to be destructive only in a minimum degree to normal tissues, acting in the greatest measure as a destroyer of cancer cells in any portion of the birth tract. So applied its advantages over radium and X-ray are its simplicity, its freedom from danger as well as the comparative cheapness of the apparatus and its ease of application. Its use is not followed with radiation sickness, and I have had cases with the uterus absolutely fixed in the pelvis, in which at the end of one heat treatment the uterus was rendered movable; thus changing immediately a mechanically inoperable condition into an operable one. Whereas the radiation sickness which follows X-ray or radium, delays operation, lowers the patient's general resistance to the disease and is rapidly followed by new connective tissue formation in the parametrium with decreasing mobility of the uterus, thus increasing mechanically operative difficulties.

Radium, X-ray, d'Arsonval current, and heat, all have a selective action for neoplastic cells, and when they are exposed for a sufficient extent to any of these agents, are destroyed. The degree necessary for destruction of a new growth by any one of the first three; however, more nearly approaches the lethal point of healthy cells and consequently adjacent normal tissue is injured to a much greater extent than when heat alone is used. Heat applied for ten minutes at a temperature of 113 F. destroys cancer cells, while normal tissue cells can stand a temperature of from 131 to 140 F. without being devitalized. (Doyen also Percy). Furthermore, heat is disseminated by conduction rather than by radiation, the penetration is a rather slow process, and is therefore absolutely controllable. This linked with the fact that the thermal resistance points of normal and malignant cells, are much further separated than with other agents, X-ray and radium, makes heat the logical choice. Too, the progressive anemia that follows the use of large doses of X-rays is not encountered. Neither are the stubborn burns produced which at times follow X-ray and radium treatment, these to be dealt with later, to the great annoyance of all concerned, to say nothing of other complications excited by X-ray and radium; such as disturbance in the digestive tract, adrenal balance, etc.

STARVATION LIGATURE

The heat treatment can be to a great advantage to the patient supplemented by the employment of the "Starvation ligature." It is not known who first employed this method; but ligation of vessels for control of hemorrhage is mentioned in the writing of Celsus (30 B. C. to 50 A. D.), and of Galen (131 to 211 A. D.). The ligation of arteries is said to have been practiced at least 1800 years before Harvey discovered the circulation of the blood (1616 to 1619). With the discovery of the circulation and the development of knowledge concerning a part played by the blood in the nourishment of normal as well as abnormal tissue, the method of ligating arteries increased in scope. It then came to be applied not only for the control of hemorrhage, but for the purpose of causing atrophy of organs or other parts of the body, and to lessen the nutrition of inoperable new growths, thus checking their further development and often causing their disappearance. The

last named use of the ligature has given rise to the term, "Starvation ligature. It has been said that John Muys, in 1626, recommended the starvation method of arterial ligature. However, the discoverer of the circulation of the blood is credited with originating this method, which procedure he used in 1651, when he is said to have treated succesfully a case of elephantiasis of the scrotum and testicle by ligating the spermatic artery. It is recorded that in 1707, Lange employed it in the treatment of goitre. A hundred years elapsed before the method was again employed, when in 1809, Travers employed it in a tumor of the orbit. Since then its field of usefulness has been gradually extended, so that the procedure has been applied to the tongue, thyroid glands, buttocks, prostate, testes, ovaries, uterus and other parts of the body.

During the latter part of the last century Dr. John A. Wyeth of New York, reported 789 cases of ligation of the common carotid, of which 95 were for malignant tumors of the orbit, and 91 cases of the external carotid alone were tied to relieve or cure, so-called malignant growths. Although this procedure was used about the same time by many others, both in this country and Europe, it was not until the appearance of an essay by Samuel D. Gross, "The Treatment of Certain Malignant Growth by Excision of the External Carotid," that the starvation ligature became the modified "Starvation treatment." In cancer of the cervix Fritsch was the first to use tying of the utering arteries. In 1888, Baumgarten was the first to use it in inoperable cancer of the uterus. H. A. Kelly in 1893, was the first to ligate the internal iliac, which was done in an emergency on account of a violent hemorrhage that occurred during the operation. Afterwards it was used by him as a method of choice, as also done by Pozzi and many others. Later, Bainbridge from seven years experience, reported in 1915, 48 cases of ligation of the internal iliac, medico-sacral, and ovarian arteries for malignant disease of the uterus. He has now treated over two hundred cases by this method which he believes gives, all things considered, results superior to any other treatment known to the medical profession today. Recent inquiry shows that the "Starvation ligature," is at present being used by a number of the leading surgeons and gynecologists of this country, and that it is today an established procedure in the treatment of advanced cancer of the uterus. It consists of ligation of the internal iliacs, the ovarians, and where deemed necessary the medio-sacral arteries. The ligation is applied to lessen the nutrition of inoperable new growth, thus checking and often causing their disappearance. The use of the "Starvation ligature," mechanically accomplishes instantly in the blood supply what a study of a microscopic specimen of carcinoma shows nature is endeavoring to accomplish. Immediately upon ligation of the above named arteries, one can observe definite blanching of the uterus and its adjacent structures.

TECHNIC

As previously conducted in our work the patient is prepared for a combined vaginal and abdominal section, the legs being elevated to secure the ordinary perineal posture, while the table is set in the Trendelburg position. The abdomen is first opened and the pelvis explored. The intestines are thoroughly packed away. The two internal iliac arteries are doubly ligated and the vessels crushed between the ligatures, the ovarian arteries with the sacromedia are also tied. The tubes and ovaries are removed when consent is given.

While the abdomen is being opened, the vagina is being dilated by a second operator and the water cooled speculum inserted. The speculum should be used only when the vagina is sufficiently relaxed to admit the speculum without injuring the mucous membrance. The electric heating iron devised by Dr. James F. Percy, consisting chiefly of several electric heating irons with an assortment of tips, and applied through the speculum, is next adjusted using the tip most suitable for reaching the diseased area of the particular case. The two operators now work together. The abdominal operator can by holding the uterus give directions as to how far the heating iron may be inserted, and by downward pressure place the uterus in a more convenient position for applying the heat. The iron is kept at a comparatively low temperature. The tissues should not be charred, for once char is formed, it prevents the penetration of heat into the surrounding tissues. Such a carbon core checks drainage and causes unnecessary absorption of toxins. The iron tip should be carried to the fundus and held there until all tissues fixed but normally movable are rendered freely movable, requiring from 40 to 120 minutes. The heat is controlled by a rheostat. There is no shock following this operation; on the contrary the patient leaves the operating room with pink cheeks and slow, full, strong, regular

pulse. Recently this heating device has been improved by Percy, who has succeeded in developing a thermogenic tube which can be used in the home or the hospital. It is made in several sizes and is inserted as is the radium capsule. It can be retained in the vagina for days if desired. Its application is started at a temperature of 110F. for first 18 to 24 hours, adding 5 degrees F. each subsequent 18 or 24 hours until a temperature of 130 F. or more is reached.

The temperature is read by placing a long laboratory thermometer beside the heating tube. With the thermogenic tube at this temperature, the cooling jacket or speculum is not required. Patients tolerate this well. The longer these patients are able to retain the tube, the more quickly are results obtained. Patients will tolerate 130 F. some of them much more, even in a malignant mass in the rectum. It is perfectly marvelous how an obstructed malignant rectum opens up under the influence of such a continuous temperature, even when a colostomy is seemingly the only thing possible for relief. We have such a case under observation now.

One important factor is that normal living human tissues rapidly acquire a remarkable immunity to increasing therapeutic degrees of heat. This appears never to be true of the low grade cell. Since the malignant cells are five times more vulnerable to heat than normal cells it is therefore not hard to see that in cutting down the blood supply by ligature, still further lessening it by sealing the smaller vessels with heat, and also, through the heat producing an increase of connective tissue which further protects against the ingress of the malignant cells we may destroy them, and yet have sufficient collateral circulation maintained to nourish the normal cells. Then too, if not supplemented by the "Starvation ligature," radiotherapy often fails to destroy malignant cells whose nests are in or near the large three coated blood vessels from which they draw sufficient nourishment to withstand its effect. Again, the "starvation ligature" so slows the blood stream that the cooling effect, which it normally has is destroyed, thus enhancing the value of the heat treatment because the cancer cells in the arterial wall are now just as vulnerable of the heat treatment as cells located elsewhere. Five years ago, I first employed this method of treating advanced cancer of the uterus; using heat as above described, combined with the "Starvation ligature," also removing any enlarged post perintoneal lymph glands found between the receptaculum chyli and obturator foramen. In accordance with Beatson's theory of the presumptive influence of ovarian irritation upon cancer growth, the tubes and ovaries are removed when consent is obtained. A further advantage in double cophorectomy and salpingectomy is the extension of the area of lymphatic block. Another advantage in the use of heat in conjunction with "Starvation ligature" over X-ray and radium is that in young women, where the patient so demands, the menstrual cycle can be preserved. Whereas, when X-ray or radium is employed, the patient is sterilized and the menses cease. A case in point:

CASE REPORT

Case No. 632-C. Housewife, age 28, weight 165 pounds, nullipara, denies ever having been pregnant, and has never been ill. Cause for consultation: First noticed bleeding five years ago. It is accompanied by pain. At first patient noticed a spot of blood on clothing, only occasionally, three or four times a month, with some discharge before her period. This had gradually progressed. About a month ago she took a great deal of exercise, walking, climbing hills, and bathing daily, which seemed to make her bleeding worse. She has worn napkins daily for the past month. For the last two months, she has had a yellowish discharge, mixed with blood and pus attended by a foul odor. Vaginal examination reveals an extensive fungus mass bleeding readily. Clinical diagnosis by pathologist, from currettings: Medullary basal celled type of carcinoma of the cervix uteri, actively growing. Consultation: Diagnosis concurred in and advised by consultant to abstain from operation as case is hopeless. Operation, August 16, 1920. Heat, by Percy method was employed, coupled with ligation of both iliacs and both ovarions. Patient left hospital during third week after an uneventful recovery. Though no bleeding ever occurred after this operation, there was a small area about the cervical canal which was slow in clearing up. One radium treatment promptly disposed of this. I saw her recently in my office. She is perfectly well, weighs 190 pounds, having gained 25 pounds since the operation. The cervix is healthy and she menstruates normally three days in each month.

The heat and starvation ligature treatment is particularly indicated in that unfortunately large number of so called inoperable and incurable cases of cancer of the uterus where there is an extension of induration into the vaginal or rectal wall or both, the uterus fixed and often a sloughing, bleeding, putrid mass stretching and filling the vagina.

The advantages of the method:

(1) Controlling hemorrhage. (a) Immediate. (b) Remote.

(2) Checking extension of malignant growth.

(3) Mitigating physical pain and mental suffering.

(4) Diminishing absorption of poisonous products.

(5) Facilitating the discharge of pus and necrotic tissue.

(6) Permitting the application of other surgical and non-surgical measures.

(7) Giving a psychic adjuvant to the physical measures employed.

(8) Preserving the menstrual cycle in young women when desired.

(9) As a preliminary to any form of treatment of cancer of the uterus; whether X-ray or radium or a contemplated panhysterectomy.

This leads me to repeat that the use of heat and starvation ligature should precede a contemplated panhysterectomy: and to add, that while I do not want to be misunderstood as decrying the use of X-ray and radium in the treatment of advanced carcinoma of the cervix as useful postoperative adjuvants, they should, however, never in my opinion be used as preoperative measures, and if X-ray or radium is to be employed in preference to heat, their value will be enhanced by antedating the procedure by the use of the "Starvation ligature."

RESULTS

Wm. P. Graves of Boston says, "As regards the value of combining the heat with the starvation ligature method it has been extensively tried out in this country, and though opinions vary considerably, the most valuable evidence is in its favor. The most complete report on the use of the method has been made by Smith, who records 100 cases treated at the Mayo Clinic Of these it was possible later to perform a radical extirpation of the uterus in 26 cases; the time chosen for the hysterectomy being about four weeks after the heat treatment. In 19 of the 26 cases operated on, no carcinoma was found in the specimen removed at the final operation. Smith's results compare favorably with, if they do not surpass, the best results from the use of radium in the same class of cases."

Our own results are briefly given here from a series of twenty cases. The youngest was 28, the oldest 56, with an average age of 43. There was no immediate mortality. Of these, every one showed improvement locally. One died later of sepsis. One, on whom ligation was not done, but heat used following incomplete operation, improved locally and in general health, until later, when against our advice radium was employed. This incidentally was immediately followed by extension of the growth. Twelve of the twenty patients, or 60 per cent, are living. Of the twelve cases, all showed improvement both locally and in general health. One has been lost track of, seven died, the time averaging nineteen months. Seven, or 35 per cent, are improved, five, or 25 per cent, are alive and well, with no subjective or objective evidence of return. Of these, the shortest time of apparent cure is two years and four months; the longest, four years and one month with an average of three years and two months.

Before closing, I want to add a word regarding the apparent destruction of the cervix by a malignant growth, and its complete restoration in normal looks and appearance, after the carcinoma was destroyed by heat. In several of my cases where the carcinoma involved the cervix and uterocervical junction, there has been a complete restoration of the cervix to normal appearance and in at least one of the series, the menstrual cycle was maintained.

Please remember that these patients were submitted to the heat and starvation ligature treatment because, from a clinical standpoint, they were considered otherwise of the utterly inoperable, incurable type. I am more than convinced that over any other form of treatment, it has not only the advantage of a low primary mortality, but in addition a largely increased percentage of lives are greatly prolonged in comfort, with freedom from hemorrhage, exhaustive and offensive discharge, and mental distress. More than this, there is an appreciable number of symptomatic cures extending over a period of years.

Surely, if no permanent cure has been effected, the relief from symptoms and prolongation of life has made this work abundantly worth while.

Finally, the principles that I am trying to reveal are that,

(1) Cancer abhors heat.

(2) By proper ligaturing, cancer can be starved without destroying normal tissues.

(3) By combining the two methods, results will be uniformly better.

(4) If the attending surgeon prefers to employ X-ray or radium rather than heat the value of either will be enhanced by antedating the procedure by the use of the "Starvation ligature."

DISCUSSION

DR. L. W. HAYNES, Detroit: Dr. Brown is certainly to be congratulated upon this series of

cases and the results which he has obtained. So far as discussing the paper from the standpoint of experience with this method is concerned, I am not able to do it. However, as presented by the essayist it sounds very feasible, and for the past several months I have been following the results of his work along this line. I think the majority of us have had more experience with X-ray and radium in treating these cases, and many of us use one of these following the operative procedure. But the method outlined by the essayist would seem to be very feasible, and I have no doubt but that as time goes on and additional cases are reported and more papers on the subject are presented, a larger number of us will be using it.

DR. FRANK SUGGS, Detroit: Several points mentioned by Dr. Brown should be borne in mind. One is as to the vulnerability of cancer tissue to heat, as compared with normal tissue. The great success of this treatment depends upon the vulnerability of cancer cells to heat, these cells being five times as vulnerable as normal tissues. They are also highly vulnerable to starvation, and any of you who for the first time see this operation in process of execution will be surprised how actually blanched the structure is after the internal iliac and the ovarian arteries are tied off. As we remember the anatomy, the uterus is almost entirely supplied with arterial blood by these two vessels. When you tie them you would think the blood supply has been cut off to such a degree that necrosis would immediately develop. As a matter of fact, necrosis does not occur, but you will realize that a cell which has any tendency to be destroyed by the starvation ligature would be destroyed by that ligation.

In regard to the difficulty of the operation, as you know, it is not difficult to ligate the internal iliac or the ovarian artery. Certainly it is not a dangerous procedure and no shock accompanies it. And as a matter of technic in treatment it is also better to open the abdomen in order to insert the hand while heat is being applied through the vagina, when the two processes can go on simultaneously, heat being applied from below by the assistant or by the operator while the ligation is being carried on from above.

Personally we have had very little experience with this technic, but have observed with great interest the work of Dr. Brown along this line. While in Los Angeles last July I went out to the County Hospital to attend the Clinic of Dr. Percy, who first popularized this method. And incidentally I was very much surprised at the enormous cancer clinic that existed in Los Angeles. There were, as I remember, about 500 cases of cancer being treated in this great county institution. There was an enormous number of cases, ward after ward, and I inquired how they managed their cases. The city has appointed a cancer commission to which the cases are referred, this commission being composed of about six eminent surgeons of the city. The cases are distributed by these men among themselves and to others, the choice depending on how, in their opinion, the individual case should be treated. And on going through the wards I observed that perhaps two-thirds of the cases were referred to Dr. Percy. Of course, the therapy employed included treatments other than the application of heat to the uterus. However, all kinds of cases are treated by the heat method. Of course these cases were kept under observation for several months.

Their opinion of the starvation ligature, which they had used quite extensively, was very favorable, and from personal observation I would say that their results justified the use of this procedure. As a rule it is, I believe, a valuable addition to our treatment of advanced cases. Remember, this is a treatment of advanced cases—those in which a large part of the pelvis is filled with the growth and extensive metastases have taken place, and this starvation ligature gets around them and blanches the organs of the entire pelvis, even the bladder. So in advanced cases that seem hopeless, this treatment has proven to be a valuable asset.

DR. WELLINGTON YATES, Detroit: I am always pleased to hear a report from Dr. Brown. We find that whereas we at one time designated the period at the conclusion of which the cure of cancer, after it had been abated, could be said to be effected, at three years, it was later found that this period was not long enough, and we put it at four years, which was not long enough, we put it a five years and that was not long enough, and now it has been put at six years. In other words, after that period there is not a definite recurrence of cancer from the primary focus.

We have all been interested in the development of the heat treatment as brought out by Percy and in his energetic way of handling the subject. He has gone into it in great detail. He is not satisfied with the instruments he is now using and at the preesnt time is developing instruments which have not yet been put into execution.

I have observed with much pleasure some of the cases that Dr. Brown has referred to, in that some of them, or perhaps all of them, have been inoperable cases and they have been made distinctly better by this starvation process. The induration has gone down as he has said, the blanching of the tissues obtains as he has said, and the pelvis becomes very free as he has said. And for inoperable cases you cannot say that any method is not worthy of honest, fair trial. Some of you may have heard the discussion of Dr. Ochsner, in which he stated that up to three years ago he had been operating, in one way or another, all cases of cancer of the uterus. For the last three years he has operated three cases, and several hundred have come to his clinic. He portrayed how he had gone through the progressive states of heat, of ligation, how he had done wide operations, cauterizations, and that he had absolutely become discouraged with the entire operative field, as operative measures are usually termed. In other words, all cutting operations are done away with in his clinic to the exclusion of radium and X-ray. And he has ovserved in these three years (which of course is not sufficiently adequate in time)—much more satisfactory results than those obtained by any other line of treatment that he has adopted. I think it is the general esntiment throughout the gynecological world more and more that cancer of the uterus deserves no cutting operation. In cancer of the uterus in which extensive destruction of the cervix has taken place operative measures only increase the destructive process and hasten the end. Also we should not operate in those cases in which the cancer cells are so localized that radium may reach them with little or no trouble.

I respectfully differ with the opinion of the last speaker that any surgical maneuver on an inoverable patient does not induce shock. These patients are shocked already, they are toxic, they are tired out in tissue and tired out in nerve energy, they cannot stand shock, and any maneuver which opens the abdomen will, without question, cause a considerable amount of shock. Therefore in my own experience of the last three years, during which period we have had a large number of cases of cancer in the receiving hospital, where we get every conceivable kind of case from early development until the death of tissue and consequent ne-

crosis is very extensive, we turn the patints over entirely to the radiologist and the X-ray man. The results are not satisfactory of course, and the question is whether they ever will be satisfactory until we know more about cancer than we do at the present time. I am firmly convinced that cutting operations as far as the uterus is concerned is a past maneuver.

DR. J. H. DEMPSTER, Detroit: I must congratulate Dr. Brown on his paper. Indirectly I keep track of his work through the presentation of his reports before medical meetings, but I have had no very great experience with the X-ray treatment of cancer of the uterus. I have X-rayed a number of cases in a post-operative way, usually those cases that are turned over to the radiologist since deep X-ray therapy has come in vogue.

Regarding the questions involved in the starvation treatment by ligation, as I understand it the physiology of X-ray treatment is practically the same in that raying over the pelvis should obliterate the arteries and finally induce a kind of starvation of the growth; in fact, our object in using the X-ray in these cases is to cut off the blood supply and thereby diminish the growth. Deep X-ray radiation has the effect of actually killing the cancer cells. As stated, I have not had opportunity to follow those cases to the end, but X-ray treatment has inter-actions whereby we induce obliterative endarteritis, effecting the death of the cancer cell itself. I think Dr. Brown's method has produced some very fine results.

DR. ROLAND S. CRON, Milwaukee: It was my privilege during the last year of my association with Dr. Peterson at Ann Arbor to review all cases of cancer treated at the University Clinic from 1902 to 1921. In reviewing the early method of practice I may say that most of the cases were treated by cauterization, and after Dr. Percy method came out it was extensively used at Ann Arbor. In following up those cases, numbering about 320 I think, I was unable to find a single case of advanced carcinoma of the cervix in which the patient was alive and well. There were two patients alive, but on their reappearance at the Clinic it was found that they had extensive involvement following cauterization. Some of the cases were also treated by ligation of the internal iliac artery, but this procedure seemed to have no influence on the advance of the carcinomatous process. The only cures reported from the Clinic at Ann Arbor are those that were treated by the Wertheim operation. Of the entire series of 320 cases, only five per cent of the patients were alive and well five years after operation. The results were so discouraging at the time that they were not published, and only after due consideration and having had experience with other methods of treatment such as radiation in the form of radium and X-ray were the results put in print, and that was done some few months ago. We feel the same as Dr. Park of Philadelphia. Dr. Howard A. Kelly of Baltimore, and others—that there is no operative means for the handling of advanced carcinoma of the cervix. We feel that the reaction following a laparotomy with incision is just as bad as radium sickness after the introduction of radium. With the exception of early cases in which the carcinomatous process is limited to the cervix itself, with no involvement of the vault or other complications, we feel that the best method of treatment is by radium and X-ray.

DR. CHARLES F. KUHN, Detroit: I appreciate the paper of Dr. Brown, as I have been watching his work for some time. About ten years ago I started to utilize the method of using a water cooled speculum or even an ordinary cautery through the cervix so that we could feel the warmth, and I thought we secured some very good results although we did not use the ligation method. Whether or not it is a good thing I do not know, but am sure it is worth trying. Of course, radium and X-ray therapy is accomplishing some things. However, we haven't enough radium to take care of all these cases. The method as given by Dr. Brown makes it possible at ordinary clinics to apply the starvation ligature in inoperable cases. I believe there is a wonderful field for its use and I congratulate Dr. Brown upon his sincere, constant effort to prolong the lives of these inoperable patients.

DR. BROWN (closing): I wish to thank the gentlemen who discussed my paper, both those who stand for and those who are against the things that I stand for.

Ewing says that if you can get at the cancer cell it is an easy thing to upset its balance. But the great problem is to get at the cell. And I think that is about the way we all feel. If we can just get at the cell there are several ways of handling and destroying it, but we have the normal cells standing in the way and many of them have been destroyed already. That is the trouble with both X-ray and radium; the lethal dose for the cancer cell is too near the lethal dose for the normal cell. It is different with heat. The margin of safety here is very broad, so you can travel well out with the heat into the territory occupied by normal cells and not injure them, in fact you even aid the normal cell in its resistance, while you have destroyed the cancer cell. The first case that Percy did, I think about 11 years ago, is alive and well today. Leo Schmitz of Los Angeles did his first case many years ago, and the first six patients on whom he used this method are all alive and well today.

For those who were not present when the paper was read, I think it well worth reviewing some of the points presented.

Byrne, a man whose report nobody would think of questioning, has set forth the results which he obtained from the use of his old crude cautery with its great long handle, where he went into great masses of cancerous growth so large that they distended the upper part of the vagina and cleared them out with the electric cautery at the junction of the cervix and vagina, and reported later, after a period of over five years, that more than 60 percent of his patients were alive and symptomatically well. You cannot get other statistics that give anything like that result. The Wertheim operation carries an immediate mortality of 20 per cent, and no one dares claim more than 5 per cent cures. That takes in both the early and the late cases.

Now, to stand up and say that we have used cautery treatment in 300 cases is not the thing we are talking about, or that we use the modified Percy technic. It is the Percy technic or it is not the Percy technic. I am not talking about the starvation ligature alone or the heat applications alone—I am discussing the use of the starvation ligature in conjunction with the heat as applied by Percy.

Dr. Yates stated that Percy has not yet completed his instruments and got them just as he wishes. I now have the second or modern instrument of Percy, the little irons are smaller than my little finger, they can be put in the cervix either at home or in the hospital, they are absolutely under control, and you can keep the temperature at the desired point for days and weeks and the patient is little inconvenienced by the treatment.

It is all right for the man who has not tried this method to think that shock may be produced by laparotomy, but I fail to see that the patient has any shock after the abdomen is opened for ligation, the reason is that in applying heat to the uterus

we are giving supportive treatment to that patient al lthe time. Heat is applied to patients before they go to operation, we try to warm them up after they get back to bed, but with this method you are using a temperature of 130 or 140 or even 150 or 155. That helps to support them, and they really do not show shock as result of the operation.

Another thing: Heat is the only method today accomplishing absolutely painless surgery. Several of you can bear me out in this. You can take a woman in the operating room and, without any anesthetic, put the iron into the uterus, start with a temperature of about 110°, and take your time. This is no job for the hurry-up surgeon. It is for the man who can painstakingly handle the instrument, not moving it about haphazard. You can put that iron in there with the heat 110°, increase gradually to 130°. I have more than once increased from this to red heat and burned out the entire uterine canal and the patient would go to sleep while I was doing it.

In conclusion I will read some extracts, taken from papers that have been read by well known authorities, regarding the results obtained by radiation in these cases.

William S. Stone of New York (Surg. Gynec. & Obstet. June 1921) from observation in over 400 cases, says: "On account of lymph node involvement in certain cases of cancer of the cervix radium cannot entirely supplant operation in all such early lesions. A strong plea is made to avoid treatment of primary cases that are too far advanced." He further states that the chief error in the use of radium seems to be an over-dosage, with the subsequent disastrous results to the neighboring tissues.

Bailey, in a recent article, deals with 336 cases. He says that practically all cases that have a complete radiation of the local lesion and the lymphatics and other involved tissues pass through a period of improvement, disappearance of ulceration, lessening or disappearance of discharge, gain in weight and improvement of health are secured in all cases but the advanced conditions. After a longer or shorter time of well being, many of the cases have further development of cancerous tissue behind the vault of the vagina.

Burrows (Annual Reports of the Manchester Radium Institute), states that of 363 cases of carcinoma of the cervix of the uterus that were treated by radium, most of them inoperable, 10 per cent show complete disappearance of symptoms and signs, but at least one-half of the 10 per cent recur within twelve months.

Clark and Keene (Jour. of A. M. A., August 20, 1921), in a list of 312 cases treated with radium, state that in eleven cases which were advanced when treatment was given the patients are dead. Also that irradiation is dangerous immediately before or soon after operation, or when employed in fresh operative fields.

Dr. Yates quoted Dr. Ochsner. From correspondence with Ochsner and also with Percy and Schmitz, I find that they are treating with X-ray and radium only the medium advanced cases. They are not using them in the others. From the alst letter received from Dr. Ochsner I find that he is still advocating the cautery as palliative.

Schmitz, reporting 163 consecutive cases (Jour. of A. M. A., Aug. 20, 1921), says: "Radiation treatment always causes a decided radiation sickness. During this period the patient could not be safely subjected to the additional trauma of a capital surgical procedure. The operation must be postponed for from three to six weeks, during which time the patient will have recovered from the radiation toxemia. If the operation is performed within a few days after radiation the patient, with an alarming frequency, succumbs to sepsis and shock." Should the operation be postponed to a later period the same danger is still present on account of necrosis of tissue in the cervical canal, which cannot be avoided. These factors and the intense connective tissue formation in the parametrium, which renders hemostasis difficult, therefore do not let it appear advisable to resort to pre-operative radiation."

W. P. Graves (Gyn. & Obstet., June, 1921), speaking from his own experience, states: "It may be said that we have not—so far as we know—cured with radium a single case of inoperable cancer of the cervix." And further, in view of his unfavorable experience with radium, and his favorable operative results, of which he gives statistics, he does not feel justified in substituting radium for radical surgery in cases favorable for operation.

John G. Clark (Annals of Surgery, June, 1920), after five years' experience with radium, states that he considers it an adjunct to surgery and that in the certainly operable cases they still advocate a radical operation followed by post-operative radiation. As yet they claim no cures from radium.

As I said once before at a meeting, I feel that those who stand for a cure of carcinoma of the cervix by the use of X-ray or radium, must find themselves in the position that Victor Hugo once found himself when he said, "I stand for a thing that does not exist."

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IMPORTANT FACTORS INFLUENCING THE MEDICAL PRACTICE OF TODAY

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We have witnessed during the past few years decided innovations in the practice of medicine, innovations that promise much for the invalid and probably more for the general public in the avoidance of unnecessary illness. Only a few

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years ago the family doctor who announced himself as physician and surgeon was in most cases the only medical authority consulted from birth until death. Gradually the idea that the family physician was not able to cover the entire field of medicine, began to impress the profession. Physicians began to limit their practice first to internal medicine or surgery, later more specifically to disease of the eye, ear, nose and throat, obstetrics or gynecology, skin disease, etc., until it is rare today to find a physician attempting in his practice to cover the whole field of medicine. This tendency on the part of so many in the profession to specialize along more limited lines, is a decided factor in moulding medical practice along new lines. It has resulted in a threatened extinction of the old type of family physician. Whether this is to be advantageous to the public is an undecided question. There are those both in and outside the profession who believe that this is unfortunate and that it is in a measure responsible for the rapid increase of the irregular practitioner.

It is argued that medical service as rendered by a group of specialists incurs an expense beyond the means of the man of moderate circumstances. On the other hand it is thought that the quality of service is so much superior that the added expense is in the long run an economy. This is an age of rapid advancement along all lines and it is absurd to demand that our profession should resort to the methods of practice in vogue twenty-five years ago. The specialist is here to stay. It is impossible for any physician to prepare himself to satisfactorily cover the whole field of medicine. We do not believe that this is to be condemned on grounds of excessive expense for medical service. In consideration of the benefits rendered we believe that the profession generally is decidedly underpaid.

With laboratories employing trained technicians within the reach of practically every physician in this state and with X-ray facilities obtainable with but little effort, there is no reason why the general practitioner should not be able to obtain such information as would permit of reasonably accurate diagnosis in a large percentage of the cases coming under his observation. That there is a large field for the general practitioner, both in the rural districts and in the cities, there is no question, but he must recognize the necessity of calling on the specialist to assist him in cases where the diagnosis is at all doubtful. All too frequently in localities where every facility is at hand to make a proper examination, it is neglected, much to the discredit of the attending physician and to the disadvantage of his patient. For this reason it may be difficult for the patient to differentiate between the regular physician and someone practicing along lines which are foreign to scientific medicine. It may be said that the patient is not willing to assume the expense. If such is the case, we believe the physician has not properly explained the necessity of such procedure or sufficiently stressed its advantages. I have frequently been called in consultation on a case where there has been no information at hand on which to base an opinion except the clinical history elicited at the time, and the results of the physical examination. In many cases this is not sufficient data on which to base a final opinion. There are too many men in our profession who fail to attend their County Society meetings and who neglect their medical literature with the result that they fail to keep abreast of the times and the quality of their work is not such as is demanded today.

Another important influence on the medical practice of today is group medicine. Recognition of the need of co-operation in medical practice practically demands that such arrangement be made if the patient is to have efficient medical service. If we are to have the proper consideration from the public we must not make snapshot diagnoses with little or no real study of the case. It is most unfortunate that patients who have been under medical observation for weeks may never have had a careful, complete physical examination or the ordinary routine laboratory examinations, which are imperative if we are to have only a fair appreciation of a patient's condition. Group practice makes it possible for the patient to obtain a complete study of his case with a minimum of inconvenience and whether in hospital association or private clinic, it marks an advance in medical practice that will be appreciated by an intelligent public.

EDUCATIONAL ACTIVITIES ALONG HEALTH LINES

Health instruction by means of popular lectures to the public, as is being carried on by the Society, also the advantages offered to the profession, are factors that are accomplishing much to the advantage of the profession of this state. The work of the State Board of Health in education of both the laity and profession is a great aid in establishing a feeling of confidence in the profession which will go far towards correcting the evil of the patent medicine vendor or the irregular practitioner. Another factor which is decidedly important in the present day medicine and which promises to become a greater factor in the near future, is the time and expense required of a young man in obtaining a medical education. With the number of graduates decreasing each year, and with the education having been obtained at

so great cost, it is not surprising that the young graduate should select the city with its large populace as a possible clientele rather than the small town or rural center as a location. The small communities are apt to be left without proper medical assistance, which must result in their having to depend on the chiropractor or mechano-therapist, or some other irregular or so-called healer totally unfitted for the work. Moreover, he is inclined to undertake some specialty because of its greater probableness, before he has had any personal experience in general medicine, which is apt to result unfavorably in that his judgment of medical problems would be immature. It is to be hoped that better transportation facilities may in a measure compensate for the sparcity of physicians in the localities more remote from the cities and larger towns, but this is questionable.

There is noted a constantly increasing number of patients coming under our observation who in their histories state that they have been patronizing some type of irregular practitioner. In many cases it is a chiropractor, in other cases a mechano-therapist. With many, the osteopath (not that he should be classed with the chiropractor) is their only medical advisor. To determine if possible the reason for so large a number depending on the irregular, I attempted to get the underlying cause. Those patients coming under my observation were well above the average in financial standing, so that it was not because of a desire to economize that such selection was made. The possibility of obtaining relief by measures other than drugs, a feeling that drugs may give only temporary relief rather than accomplishing a cure, and that possibly the measures used by the irregular may be more efficient and lasting were causes given by the majority. Is it not possible that we have neglected, to the disadvantage of the patient and to the discredit of the profession, certain therapeutic measures other than drugs?

The irregular is a skilful advertiser whose statements relative to his ability to cure are gross misrepresentations. He is of the same type as the individual who sells worthless securities to a public that desires to get rich quick. The reputable physician is honest with his patient; he even acknowledges his limitations, both as to diagnosis and cure. With the uneducated this may be a fatal mistake, but the reputable physician must be an educator, and in time, and with the advancement of knowledge, we believe he will be thoroughly vindicated and come into his own. His high standard of honor and fairness to his fellowmen will never permit him to stoop to the other's type of propaganda. It may be on the other hand, that the physician is too decidedly reactionary and may condemn procedures as valueless, therapeutically, that have certain value. This has been the tendency of the profession at one time with reference to practically everything but drugs. Had the value of other therapeutic procedure been earlier recognized, we probably would have been spared many of the irregulars who attempt to make a cure-all of a procedure of possible value in certain conditions. As a concrete example, the unwillingness on the part of the profession to recognize the proper value of suggestion in disease and who scoffed at faith as a valuable adjunct to his other therapeutic measures, is responsible for the Christian Science healer whose therapeutic armamentarium is limited to suggestion only. A greater desire to educate and more willingness to serve the community in other than purely professional matters, might do much to re-establish the physician in the esteem of the public, which some feel he has lost to a certain degree by his unwarranted isolation in all matters other than medical. It is only by education rather than by legal enactment that we will so enlighten the public as to be relieved of these medical parasites. With every member of our profession doing his duty in an effort to enlighten his clientele as to the advantages of scientific medical service, we need have no anxiety as to the inroads on our legitimate fields by the quack or so-called unorthodox or irregular practitioner.

Coincident with this decided advance in the profession, the laity has been awakening to the value of health as an asset. Formerly, their physician was consulted only when they were ill. The idea of a thorough physical inventory is comparatively recent, much more recent than specialization in medicine. As a result of influences originating largely outside the medical profession, a careful physical examination is becoming a habit with many, and they are innoculating their friends with the idea that it is a necessity; whereas, formerly they could not conceive it an advantage to spend their money with physicians except in actual illness, they now are being educated to believe that prevention is far more valuable than cure and that an investment of this kind yields satisfactory financial returns to say nothing as to prolongation of life and freedom from suffering, which can certainly be accomplished in a great majority of cases.

The necessity for greater attention to health conditions has been impressed on the public mind in several ways. The great percentage of unfitness discovered in the examination of our young men during the late war awakened many. "About four million male persons, be-

tween the ages of 18 and 42 were examined. The resulting figures of defects serve as an index to the condition of the whole country, bearing in mind that they apply only to men in the prime of life. Of 3,764,000 in the first and second draft, 555,000 were rejected as entirely unfit for service. Of about two million seven hundred thousand called to service, 47 per cent had physical impairments, a figure which some good authorities believe is much too low.

Further, the nutritional workers, going into our schools find from fifty to eighty per cent of our children below par physically. And the children from the homes of wealth are as bad off as those from the tenaments!

Let me also call your attention to the results of the observations of one of our large life insurance companies, which since 1911 has been carrying on a campaign in an endeavor to lengthen the life of its policy-holders. They report their results with a class of individuals who live "under an industrial strain and economic pressure likely to render its members more susceptible to disease. To spread health knowledge among its policy-holders this company has prepared and distributed booklets and pamphlets giving instruction in hygiene, suggestions for the care of children and advice for the prevention of disease. The total distribution to January 1, 1924, was 306,000,000 pieces of literature. A visiting nurse service was provided, covering more than 4,000 cities and towns and providing for the care of their policy-holders when ill. To December 1, 1923, a total of 18,932,224 visits had been made. This program was supplemented by the company's local health exhibits, "clean-up," safety, pure milk and other health campaigns, and the making of health and sanitary surveys. They report that "measured in terms of lives, the improvement in industrial mortality in 1923 over 1911, means a saving of 52,600 lives; measured in terms of dollars and cents, it means a savings of $12,680,000 in death claims in 1923 alone.

In comparing the figures of 1911 with those of 1923, it was found that there were 52,600 fewer deaths for all causes in 1923, 16,600 fewer deaths from tuberculosis, the death rate falling twice as fast in Industrial department as in the U. S. Registration Area, 3,600 fewer deaths from influenza and pneumonia, 1,900 fewer deaths from heart disease, 2,700 fewer deaths from chronic nephritis, and 2,600 fewer deaths from typhoid. The increase noted in the death rate was from automobile accidents and cancer.

A careful survey of the records of 5,987 persons examined during the first two years has been made and some remarkable facts brought out. Whereas, in five years 412 of these persons should have died according to the American Experience Table, actually only 217 died. In other words, the death rate of this selected group of nearly six thousand persons who thought enough of their physical welfare to have a health examination was only 53 per cent of the American Experience Table and 72 per cent of the American Men Table. In one year those examined showed a mortality of only 39 per cent of the American Experience Table, while ordinary policy-holders showed a rate of 70 per cent. The-company estimates that on this venture it returned the money invested in the examinations (which were free to policy holders) and made a profit of 200 per cent in five years. Another fact brought out was that unless the examinations were regularly repeated, the beneficial effects wore off in about five years.

As a profession, we have been reticent in educating the public as to the advantage of careful medical investigation at frequent intervals. Peter MacDonald, (Brit. Med. Jour., Aug. 9, 1924) in a discussion entitled "The Role of the General Practitioner in Preventive Medicine," calls attention to the necessity of a different relationship between physician and patient for economic reasons, as indicated in the following verbitim quotation:

> "The economic demand on the medical profession has, until recent years, been entirely a demand or cure, and, with the vast majority of the profession, still is a demand for cure. Speaking in terms of economics, we are the employes of the people who pay us our fees, and in the main we perform the task they set us to perform, and on the whole that task is to cure or to try to cure, and tha is what we are paid to do. It is only within recent years that we have begun to prevent, and it is still more recently that we have been asked to prvent and some of us paid to prevent. A result of the outlook which I have described is that until comparatively recently we received our emoluments from people who were ill—a highly unstable position, for it meant that we obtained fees from our clients at just the time when they were least able to afford them."

We are not free from criticism when members of families which have looked to us as the medical adviser, lose their lives 5, 10, 15 or 25 years earlier than was necessary if they had been carefully studied and such advice given at the proper time as might have prevented their early demise. How many business men develop arteriosclerosis and arterial hypertension with a resultant apoplexy, which might have been avoided had the individual been under observation regularly for some years previous and had been properly educated in matters of health. The same might be said with reference to a large number of troubles of organic character that are the chief causes of death after 45. In practically all of these troubles, with careful medical supervision and the patient educated as to his physical limitations,

his life might have been prolonged many years.

This, it seems, is the situation which our profession faces. In many ways the laity is being educated as to the advantage of such a regime. We must now inquire if we are prepared to resume our responsibility. I mentioned earlier the formation of medical groups or clinics which it seems is a necessity if we are to meet our responsibility to the public. It is not my purpose to advocate group practice with a common financial arrangement. This may or may not be advantageous, but I would advise the association of men of different specialties locating themselves in a convenient way in order that the patient may be referred without great inconvenience as his case may demand. There must be freedom from personal jealousies and such professional confidence as will permit the patient to receive the greatest possible good.

The expense to the patient of such an arrangement should be determined by the amount of service rendered and his ability to pay. With very few exceptions the members of our profession are always underpaid. The laity must be educated as to the value of health as an asset in life. A man that would gladly spend $500 in having his car overhauled would feel that he was being robbed if he paid $50 for an examination which might mean years of life or the absence of suffering, which could not be properly measured in a financial way. We are to blame for not educating our clientele somewhat as to the value of our service. Too frequently we criticize a fellow practitioner who has received a seeming large fee without first knowing how much time he has devoted to the case or what it may mean to the patient. There is no profession where the members have to spend so many years and with such a financial outlay, as the medical profession, and probobly of all the professions we are the mast poorly paid. Let us have more interest in the welfare of the profession as a whole, and in so doing we will establish ourselves much higher in the public esteem.

DISCUSSION

DR. BRUCE C. LOCKWOOD (Chairman): There is a lot of talk. You see it in the medical journals and you see it copied from the medical journals into the newspapers,—talk about the standing of the medical profession with the laity being low. The people are preferring chiropractors and irregulars.

I think this investigation that was carried on in Chicago last year has done a lot of harm, because I don't think it is true. I think the standing of the medical profession with the people today is higher by far than ten years ago and is rising all the time.

It has taken the life insurance companies and some concerns of business experience to teach the medical profession about the value of periodical health examinations. The medical profession is always lax in business methods.

I think the people are wanting periodical health examinations. Even as lazy as they are, there are a lot of people who come for periodical health examinations; and the people are shopping from one physician to another until they can find a doctor that will give them a thorough examination. I think the people are coming to demand it. I think that they are willing to pay for it.

In regard to the big question that comes up, that of finances. There are many doctors who perhaps overcharge them. Some of them—probably the majority—undercharged them by far. If the doctor will figure up the cost of an examination in his time, based upon the salary his neighbor is drawing, the time spent on the patient, his rent, and so forth, he will find that the medical fee is lower than it should be.

It is my feeling that there should be some definite arrangement, made perhaps through the State Medical Society or any Medical Society, as to the cost of these examinations and how much the doctor should receive because the average patient, many of them, always feel that they are charged perhaps a little bit too much many times.

You might charge one patient five dollars and he might think it was cheap and the next patient would think he was stuck. One patient might think twenty-five dollars was cheap and another think he was stuck. We should have newspaper publicity on what these physical examinations should cost.

DR. C. W. HEALD, Battle Creek: I have been very favorably impressed with the paper to which we have listened this afternoon. But I don't think we can put too much importance upon advising our patients to have thorough-going examinations. I am sure they will have more confidence in us and we can build up the confidence in the medical profession in this way.

I wish to cite just one case that came under my observation just two or three weeks ago. This was a lady from New York City who had been under the care of a prominent physician and she had been complaining for a goodly number of years of indigestion, as she called it. While there was no real definite group of symptoms suggesting any very definite chronic disease, I did not feel free to allow this patient to slop through my hands without investigating the gastro-intestinal tract very thoroughly.

I advised an X-ray study of the gastro-intestinal tract, and found that she had gall-stones. She was operated about two weeks ago and seventy gall-stones were found in the gall-bladder. She was delighted to find the cause or the basis for her group of symptoms.

I think this only impresses upon all of us the fact that wherever there are symptoms extending over quite a period of time we ought not to be satisfied unless we make a very thorough investigation of the patient.

DR. HARRY CLARK, Detroit: I want to thank Dr. Eggleston especially for bringing out the points that he has in regard to examination,—physical examination, laboratorily, both from the standpoint of the clinical diagnostician and the standpoint of the roentgenologist.

I have in mind a so-called irregular, an osteopath, who makes a business of taking care of people, making a yearly charge for keeping them well. This man, strange as it may seem, gives each one of these patients a complete examination, including blood count, gastro-intestinal examination, X-ray examination of the gastro-intestinal tract, stool examination, urine examination and gastric contents examination, from the laboratory standpoint. That is the first thing that is done. And he makes a complete physical examination. He tries to regulate that patient's daily life.

He is doing something for these patients that

their physicians should have been doing. And he is charging a good round fee and getting it.

It is not that people won't do it. It is because the doctors fail to use a part of their armamentarium that is at hand. And if they will use it, they will get better results.

The doctor spoke especially about the batting average of the man in the Cincinnati General Hospital and showed how it was pushed up by the use of complete examinations and the realization that every patient that died in the hospital was going to have an autopsy. They pushed it up from 50 per cent to about 80 per cent. These are the things that help impress the general medical profession with the fact that if you are going to make a correct diagnosis you must make use of every instrument which is at hand.

DR. E. L. EGGLESTON (closing): In reference to the present feeling of patients that they are overcharged, I would like to know how many wealthy doctors there are here. There are fewer men who acquire financial affluence through the medical profession than anything else.

A man will take his automobile to the mechanic and insist that it be looked over carefully. It may cost $50, possibly more (I have paid more myself without complaining). When you ask the patient to have a thorough physical overhauling, for which he is charged $50, he feels that the charge is excessive. You know that in comparison with his automobile inventory, if he should pay you two or three hundred dollars it would not be excessive. It may be possible than in exceptional instances excessive charges have been made both for physical examinations and medical services, but this is the exception rather than the rule.

I feel that we err on the side of not educating our patients to the value of routine examinations at stated intervals for which they should pay a reasonable fee. In the majority of cases we really make them objects of charity by giving our services for a sum which is less than our time is really worth.

STUDIES IN THE TECHNIC AND CLINICAL APPLICATION OF SEX GLAND TRANSPLANTATION*

MAX THOREK, M. D.
CHICAGO, ILLINOIS

It is one of the tragedies of human life that at the time when the mental powers and judgment have attained their full maturity, when the man is of the greatest value on account of his experience and wisdom, that the physical powers should wane. There is then the sad spectacle of a man capable of conceiving and planning the execution of great projects, but physically unable to execute them. "Young men for action, old men for counsel," says Francis Bacon in one of his Essays: "The Experience of Age Directs New Projects, But the Errors of Young Men are the Ruin of Business." Nevertheless, the world, which judges mainly from externals, rudely pushes aside the counsel of the old and relegates the man of ripe experience to the scrapheap, falsely considering that the mind is as weakened as the body.

Physiologic senility is an unfortunate fact, but premature physical senility is far worse. It is a condition which for one reason or another is prevalent enough, and one that we meet every day in some way or other, and deal with by whatever means we can to hold back the effects of advancing years.

Biological studies have shown that bodily and mental vigor depend upon the activity of the vital processes, and that the glandular secretions of the body play a most important role in the regulation of the functioning of the vital processes. "The endocrines" says Garretson[1] "are fundamentally basic to all principles of physiology; in fact endocrinology is physiology. . . We must all be endocrinologists to practice successfully the art of healing."

Of all the endocrine secretions that of the testicle is perhaps the most important in dealing with the general vigor and "masculinity" of man, and is of very particular importance in regard to senility. In women, of course, the ovaries play a similar role.

Although from early times it was known that in a general way the secretion of the testicle, apart from the generative function, was concerned with the maintenance of masculinity yet it was only toward the close of the Eighteenth Century that Hunter[2] distinguished secondary sex characters as being independent of the reproductive function. The work of later investigators established the fact of a dual testicular secretion, i. e. the seminiferous output and another which affected the whole organism, giving it the physical character of "maleness" and governing all sex characters and impulses.

While the question of a separate testicular secretion affecting male sex characters is universally accepted, yet even at the present hour there is not complete agreement regarding what particular element of the testicle is responsible for the secretion governing sexuality and how this secretion acts. On the one hand, there are some who maintain that the spermatogenetic elements of the testicle alone are concerned not only with spermatogenesis and elaboration of ripe spermatoza, but also that these same elements prepare and discharge substances into the blood and lymphatics which act as a hormone and are directly responsible for secondary sex characters as well as for sexual desire and potency. On the other hand, there are those who maintain as completely proved that the spermatogenous elements of the testicle are concerned only with spermatogenesis and attribute to the so-called interstitial or Leydig cells of the testicle a distinct glanular function which alone is responsible for sex characters, desire and potency. This latter view was con-

*Read before Section on Surgery, M. S. M. S., Mt. Clemens, Sept., 1924.

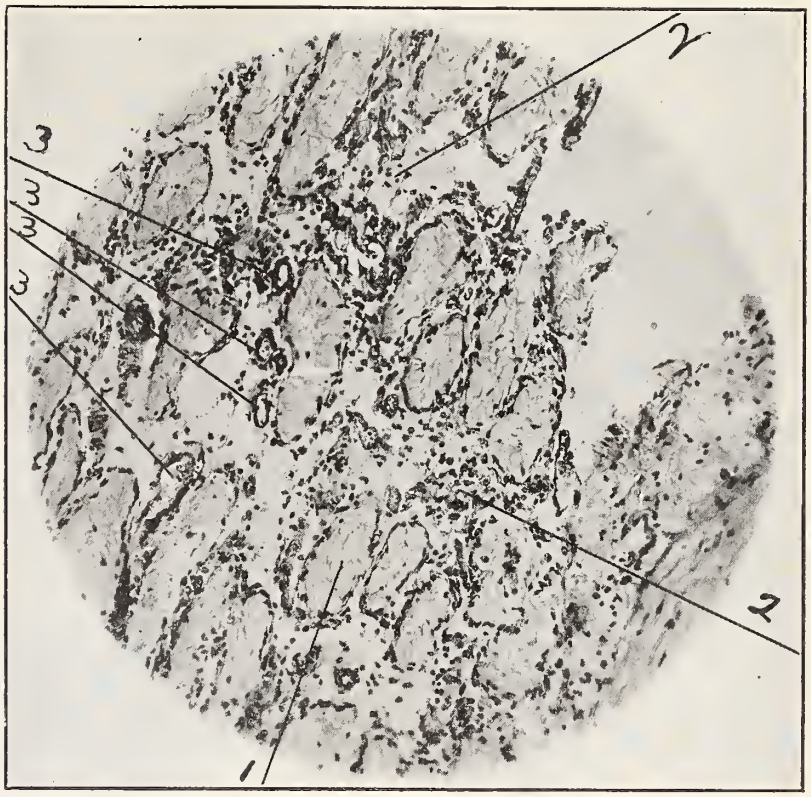

Fig. 1. (1) Tubuli seminiferi completely degenerated. No seminal cells. (2) Interestitium increased in quantity. Objective 7.5; ocular 8 (Leitz apochromatic). Magnified 205 diameters. Hematoxylin and eosin.

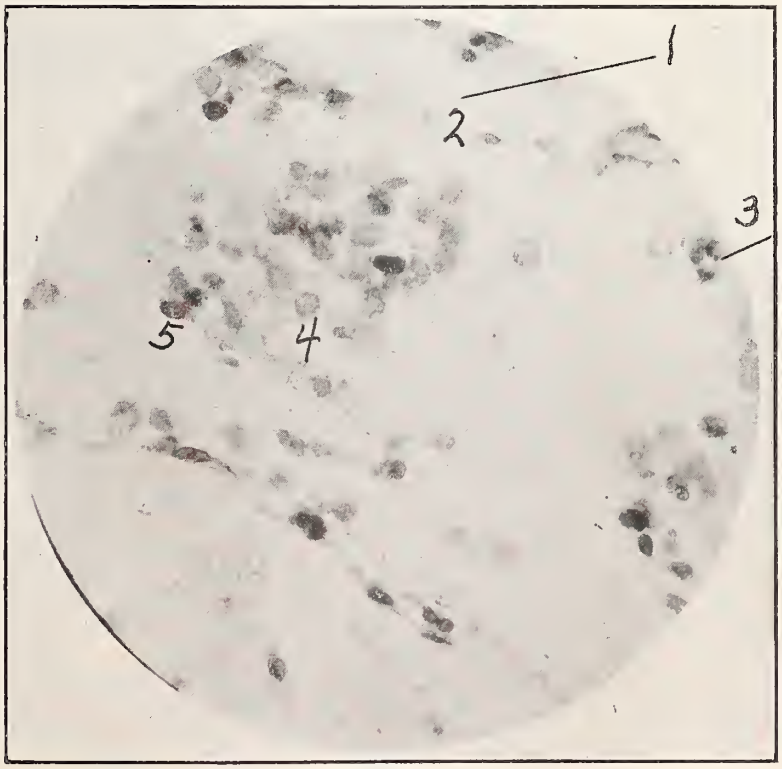

Fig. 2. (1) Tubulus seminiferus. (2) Wall of tubule composed of connective tissue. (3) Leydig cells. (4) Leydig cells. (5) Leydig cells. Objective 7.5; ocular 2. Leitz apochromatic. Hematoxylin and eosin stain.

sidered settled by the experimental investigations of Bouin and Ancel[3] in 1904; it was further strengthened by Steinach's[4] researches in 1912 as well as those of Massaglia[5] and many others.

Some have thought that the Sertoli cells of the testicle were concerned in the elaboration of the organic hormone referred to; but while there is a multitude of evidence to show that these Sertoli cells act as nutritive cells to the sperm cells, there is no evidence that they elaborate an internal secretion.

That the Leydig cells alone furnish the sexual organic hormone is opposed by Retterer[6] and others. These investigators, from histological findings, consider that the epithelial cells of the seminiferous tubules become transformed into reticulated tissue and furnish a plasma the absorption of which into the organism determines secondary sex characters and desire.

In order to throw some further light on the question at issue I have made a number of investigations on the higher apes as well as upon human subjects. This experimental work which I have described in previous contributions on this subject[7], [8], [9], may be summarized as follows:

The animals were castrated and after a lapse of time, when they were found to be sexually impotent, the testicles from young similar animals were removed and transplanted into those castrated. The removed testicles were, however, prior to transplantation, submitted to roentgenization which, though not sufficient to devitalize the Leydig cells, was yet enough to destroy all seminiferous cells. In other words, the testicles were microscopically "interstitialomas" (i. e. composed of interstitial tissue alone.) The results of this animal experimental work showed 75 per cent of restoration of sexual potency and 25 per cent failures. Among the successes should be mentionel the transplantation of a human ectopic testicle in a macacus nemestrinus. By successes I mean the restoration of male sex characteristics as well as of sexual power and libido.

In two among other human cases, in which I had the opportunity of studying the Leydig cells, the results were of the greatest value in establishing the exact role played by these elements. The first case was a man who was powerfully potent sexually, with intact libido, but who was entirely unable to produce an emission of semen. In this man the tunica vaginalis was opened and the testicles investigated. Macroscopically the testes had the appearance of eunuchoid testes. Microscopical examination showed an absolute absence of seminal cells upon studying a great many sections; neither could an isolated Sertoli cell be detected. On the other hand, the Leydig cells were increased in number. The inevitable conclusion that could be drawn in this case was that the only testicular elemental cells present, the Leydig cells, were responsible for the internal secretion and for the clinical manifestations of powerful sexuality in this patient.

The condition of the testicular elements can be appreciated from the accompanying histologic sections: (Figs. 1 and 2.)

The second clinical case was that of a man, aged 70 years, with active and potent *vita sexualis*. Physically the man appeared much younger than he really was. After complete examination his case was diagnosed as bilateral cryptorchidism; incipient bilateral inguinal hernia; verified on operation. A necrotic calcareosebaceous mass was found in the right inguino-abdominal region which, on microscopic examination, was found to consist of dead

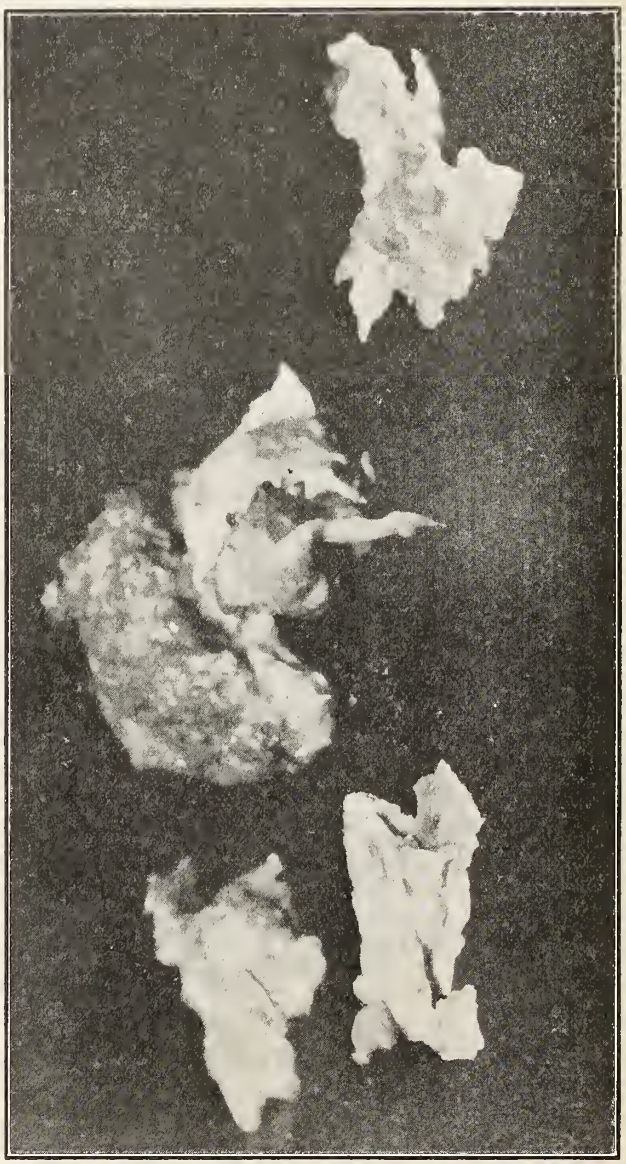

Fig. 3. GrGoss appearance of calcified and degenerated intra-abdominal tumor (testis).

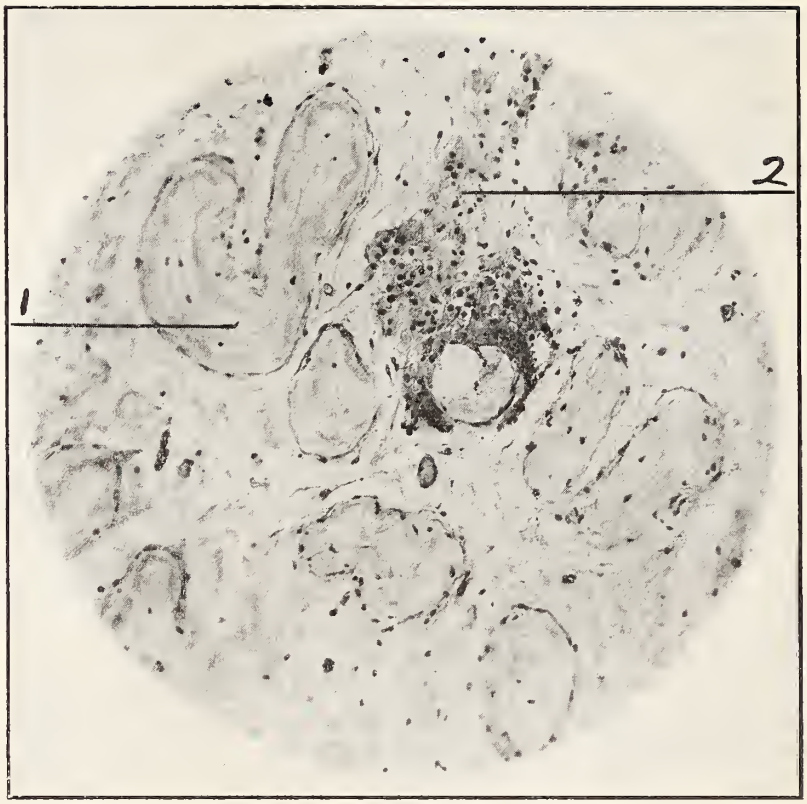

Fig. 4. Mr. J. K. Cryptorchidism. Ocular 8; objective 16. Magnified 105 diameters. Leitz apochromatic. Hardened in formolin, stained with hematoxylin and eosin. (1) Empty tubuli seminiferi. (2) Interbular synctium containing Leydig cells.

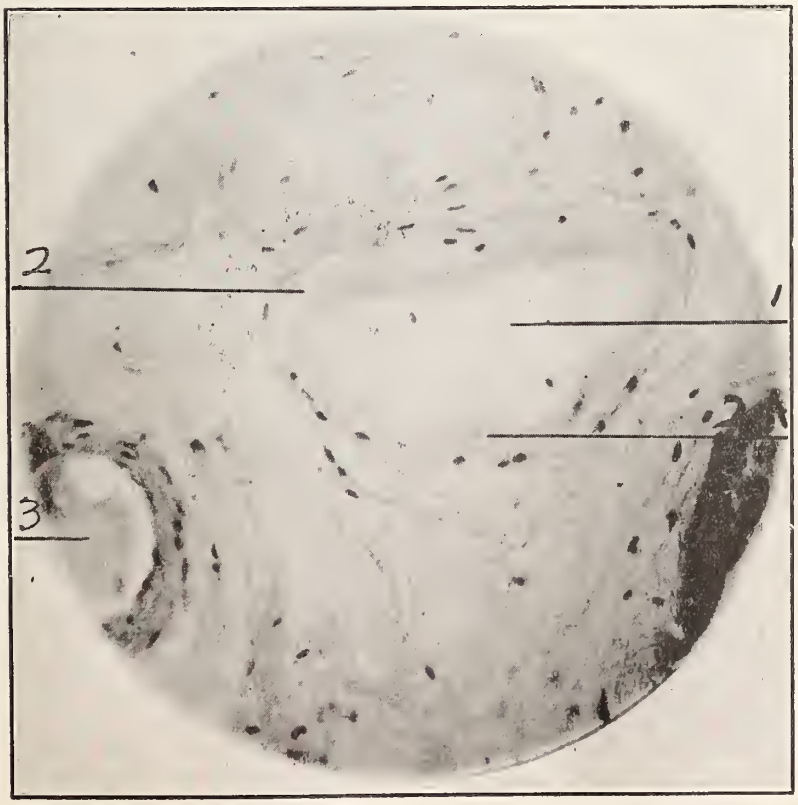

Fig. 5. Mr. J. K. Cryptochidism. Ocular 8; objective 8. Magnified 215 diameters; Leitz apochromatic. (1) Empty tubuli seminiferi. (2) Wall of tubuli composed of one layer of connective tissue cells. Total absence of spermatogenetic elements. (3) Much thickness of blood vessel walls.

testicular tissue and debris. (Fig. 3). A cryptorchidic testicle was found on the left side. The accompanying illustrations show sections from the left cryptorchidic testicle. (Figs. 4 and 5).

These sections disclose total absence of spermatogenetic elements with abundance of reticulated syncytium and well-developed Leydig cells.

Clinically this patient showed persistence of marked sexual potency with remarkable virility for his age, and normal sex characters. All these factors can lead only to the conclusion that the Leydig cells, the only testicular cells left, were *alone* responsible for them.

On the other hand, the microscopic investigation of testicular sections from eunuchoids have shown apparent abundance of Sertoli cells and spermatogonia, but no Leydig cells, yet no evidence of masculinization was present. (Fig. 6).

All research work that I have done on animals and on clinical cases which I could thoroughly investigate have in every way strengthened the views of those who, like Lipschutz[10] insist on the incretory function of the Leydig cells, and that this incretory function governs virility.

I now proceed to the question of testicular transplantations. That such transplantations "take" and effect in the organism the lost function of the organ which the graft replaces has been proved by such an array of experimental and clinical facts that it would be entirely superfluous and laboring the point to more than refer to it here. The only question is the durability of the graft, and this I insist is a question of technic. I have shown elsewhere[11] before the Royal Academy of Medicine in Rome and the Surgical Society of Paris, France, that there is no question whatever regarding testicular transplants living and becoming vascularized. After much experience I arrived at the conclusion that implantation of the graft in the retrorenal space, between Gerota's capsule and the endo-abdominal fascia, offered the best opportunities for the graft on account of the rich vascularity of this region. But the graft may also be implanted abdominally in the supraperitoneal space, i. e., in the region of the deep epigastric vessels, the mobile and free areolar tissue of which forms the base upon which the implant rests. The graft is sufficiently secured in this latter place by the gentle presure exerted from above by the rectus abdominalis muscle; the "give" of the peritoneum obviates any undue pressure on the graft by the muscle or otherwise.

The technic of Lichtenstern and Lespinasse is faulty and causes a rapid disappearance of the implant. Pressure conditions are responsible for failure in the technic of the former and too thin sections (1 mm.) result in failure when the technic of the latter is used. The best results are obtained when the whole testicle is used. The testicle after removal is denuded of the tunica vaginalis and the tunica albuginea is cauterized in such a manner as to expose the tunica vasculosa. This method I have termed "lanternizing" and it facilitates the vascularization of the implant in its new abode.

The complete details of my technic with copious illustrations were given in an article published in November, 1923,[8] and in my book on "The Human Testis."[9]

It should be said here that although in a properly executed transplantation the graft becomes vascularized, lives and functions, yet it

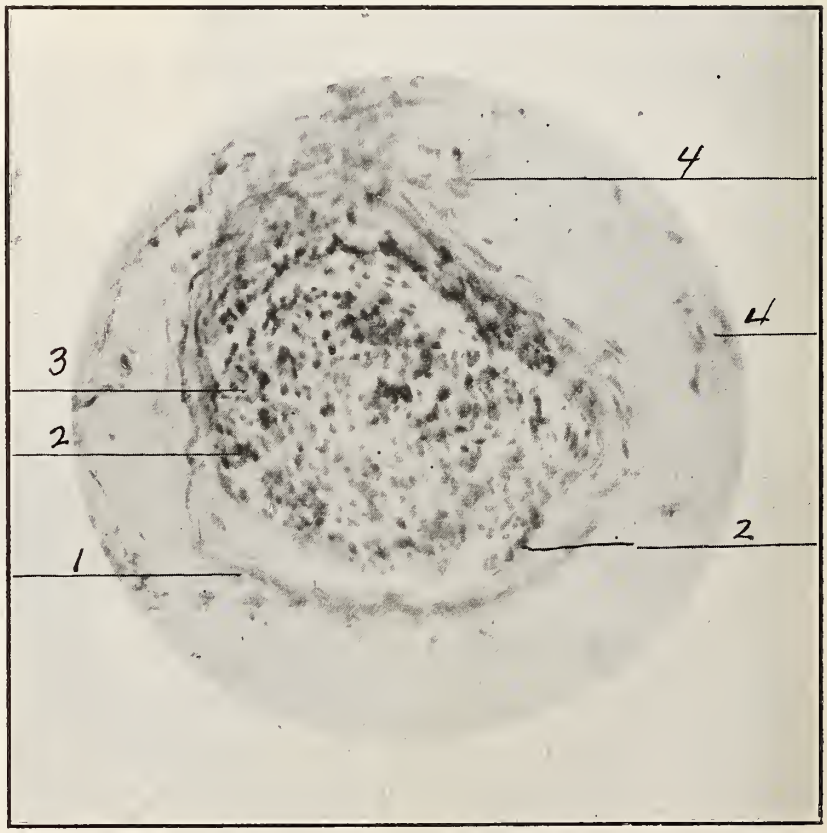

Fig. 6. Eunuchoidism. (Author's observation.) (1) Wall of seminiferous tubule. (2) Sertoli cells. (3) Spermatogonia. (4) Connective tissue. Note absence of Leydig cells. Magnification of Fig. 18 to 384 diameters. Lietz apochromatic microscope. Ocular 4 X; objective 16.

slowly undergoes syncytial transformation. This begins in the seminal cells and finally results in the disappearance of the Leydig cells which are the most resistant and the last to disappear in the graft. But this process takes from two to three years, and then a fresh implantation can be made, if need be, which will be effective for a further period.

Testicular transplantation is of undoubted surgical progress and a method of therapeusis with clear indications, but it is an unfortunate and regrettable circumstance that, owing to lurid, sensational and fantastic newspaper descriptions, one, and in fact the least important therapeutic result of testicular transplantation should have been heralded as the sole object of the operation. This has prejudiced the lay mind and to some extent professional opinion and has cast discredit on a method of surgical therapeutics which is the outcome of many years of patient research and experiment, and which, when indicated, may be expected in a great majority of well selected cases to give excellent results. I refer to the exploitation of the purely sexual side of testicular transplantation, and to the claims made that this operation is a "rejuvenating" one. That the implantation of mature testicular tissue in a patient who, on account of loss or damage to his testicular tissues, may have become sexually impotent or lacking in desire, can restore *potentia coeundi* and desire, cannot be denied and is frequently observed; but testicular transplantation is not a Fountain of Youth, nor does it, like a Mephistophelian wand, restore a sexually decrepit Faustus to a condition of ardent and active sexual regeneration. But while there is no "rejuvenation" in the strict sense of this word, because no organ or set of organs can be returned to a juvenile state when pathologic or advanced senile changes have made anatomic senile changes in them, yet there is a certain restoration of function. In an individual in whom, owing to deficiency of gonadal secretion from any cause, there is a *premature* loss of virility, testicular thansplantation may reasonably be expected to restore such lost virility. By virility I mean not alone sexual power, but all the physical and mental attributes which go to form manliness.

Whether the results following transplantation be the direct result of the testicular hormone alone on the organism, or whether it is due to the excitation of other glandular activities by the testicular secretion, is not a question of clinical importance; but what has been observed by other operators and clearly by myself is that in the prematurely senile the transplanting of testicular tissue has brought about a lowered blood pressure, an increased muscular power, diminution of adiposity, amelioration of impaired eye sight, symptomatic sexual restoration and an improved *psyche* owing to the improved physical condition.

Premature senility, therefore, quite apart from merely sexual consideration, is an indication for therapeutic testicular transplantation, or rather, as I prefer to call it, a *therapeutic gonadal implantation.* Loss of the testes through traumatism, tuberculosis, sarcoma, suppurations, etc., neurasthenia gravis, dementia precox and other psychoses, and various glandular syndromes, such as Froehlich's disease, eunuchoidism, hermaphroidism; in fact, any condition in which the testicular secretion (and consequently that of the Leydig cells) is either absent or deficient, is *per se* an indication for therapeutic gonadal implantation. The prime object of the intervention is not sexual, but the restoration of impaired virility which, of course, includes the sexual function. On this view the operation may be quite successful, even though the restoration of sexual power is but slight or even absent.

From 1919 to 1923 I performed altogether, 97 therapeutic gonadal implantations in males for the indications and with the results shown in the following table:

TABLE

RESULTS OF 97 TESTICULAR TRANSPLANTS OBSERVED FROM 1919 TO 1923

Type of Cases	Type of Transplant	Results
No. of Cases—69		
SENILITY, physiological and precocious, representing all degrees of clinical manifestations including the male climacterium and chronic constitutional disease.	29 homotransplants	31 symptomatic restorations to normal.
	40 heterotransplants	13 markedly improved; 12 slightly improved; 13 failures.
No. of Cases—11		
LOSS OF TESTES from trauma, tuberculosis, sarcoma, or suppurations.	3 homotransplants	8 markedly improved;
	8 heterotransplants	3 failures.
No. of Cases—8		
NEURASTHENIA GRAVIS; Sexual neurasthenia; early impotency not due to organic disease.	3 homotransplants	5 markedly improved;
	5 heterotransplants	3 failures.
No. of Cases—5		
DEMENTIA PRECOX.	1 homotransplant	2 markedly improved;
No. of Cases—4	4 heterotransplants	2 failures; 1 slightly improved.
GLANDULAR SYNDROMES. (Froelich's disease, 2 Eunuchoidism 1, Hypogenitalim.)	4 heterotransplants	1 slightly improved; 3 failures.

This table shows complete symptomatic recovery or marked improvement in the following percentages:

Senile atrophy	64 per cent.
Functional disorders	12 per cent.
Trauma or pathology	72 per cent.
Psychoses	40 per cent.
Glandular syndromes	25 per cent.

The field for therapeutic testicular transplantation is therefore wide and improvement in certain well-defined pathologic states can be anticipated in properly selected cases. Moreover the accumulation of clinical data may widen the scope and give the operation a definite status in surgical therapeutics. The same is true of ovarian transplants.

Summarizing the subject it is considered that the following general propositions may be laid down:

1. That the interstitial cells of the testicle, the Leydig cells, govern not only sexual power but also male characteristics, physique and virility in general.
2. That testicular implants live and become vascularized, and that the Leydig cells in such implants have the longest survival.
3. That the Leydig cells in transplants of testicle exert the same effects on the organism as the Leydig cells in the normal testicle.
4. That for therapeutic purposes grafts from the testicles of the higher anthropoids may be of equal utility as grafts from human subjects.
5. That the best therapeutic results are obtained with grafts implanted in the retrorenal space, or supraperitoneally in the region of the deep epigastric vessels.
6. That testicular transplantation is indicated as an excellent method of surgical therapeutics in any condition which may be fundamentally due to loss of testicular function, i. e., complete or partial failure of testicular secretion.
7. That testicular transplantation is not a "rejuvenating" operation, although generally it may be expected to materially restore physical and mental capacity which has been prematurely lost.

DISCUSSION

DR. A. W. HORNBOGEN, Marquette: I think it is rather presumptious on my part to attempt to discuss such a scientific dissertation as has been presented. You all realize that in order to thoroughly discuss this paper a man must know absolutely all the histological elements as well as the serological elements and other phases of the question at issue, and I must confess to my total inability to discuss this paper.

I consider that Dr. Thorek, in making these experiments that have taken years of time and painstaking work, has proven that the hormone of the testicle comes from the Leydig cell. I think that is one of the disputed points, a point on which there is much difference of opinion by different men who are working on this line of therapeutic treatment but I think that he has proven whence the internal secretions of the testes come. I think it was fortunate for Dr. Thorek to be able to demonstrate that the Leydig cell was the active part in delivering the testicular hormone from his studies on the human cases he presented to us.

DR. FREDERICK W. ROBBINS, Detroit: We do not say much about this subject because we do not know much about it, but I would like to ask whether in the case of Dr. Frank Lydston, who experimented quite largely and also wrote a book on this subject, it is true that the operation he brought out did not prove successful. It is easy to be enthused with the temporary results following transplantation in those without the gonad function. Dr. Lydston was quite enthusiastic and I think that enthusiasm lasted for several years, or until his death. Others have considered the same subject and have concluded that one is not justified in trying to transplant testicles into human subjects, for various reasons. One of them is the difficulty one experiences in finding anyone who is willing to give up a testicle for the sake of another, and another reason is the rather rapid atrophy which occurs. I would like to have Dr. Thorek discuss from his standpoint Dr. Lydston's work, about which he was so very enthusiastic.

DR. LOUIS J. HIRSCHMAN, Detroit: I wish to inject some observations that I heard Dr. Voronoff give in his paper last year in London. I do not know a thing about the subject, but I heard a few remarks which I think may be of interest. I think the work these gentlemen are doing has a fairly large economic effect. Probably ten years from now the men who sit around listening to this subject will be wearing different clothes because of the work they are doing.

Dr. Voronoff showed many interesting pictures, among them an old decrepit looking chap. He then showed some ram's testicles which were split into wafer-like masses and transplanted into old, scrawny looking rams. He then showed another picture of large, fine looking rams, with long, silky coats, longer than anyone had ever seen on a ram, and that was the result of transplanting the testicles into these old decrepit looking rams. Then he showed a moving picture film of a poor old toothless and lame medical man walking across the screen, an old fellow with no teeth, no hair, nothing. Then another picture showed a gentleman who bore some very faint resemblance to the old gentleman, rowing a young woman against the current in the Thames. That made some impression on me, and after I went away from the meeting I happened to pick up a paper published in Paris and saw where the French Agricultural Commission had become so impressed with Voronoff's work that they had made an appropriation of some thousands of francs for the continuation of the work among sheep, thinking that if such a result could be obtained by Voronoff's work it would be well worth while, because of the better wool they would obtain.

DR. HERBERT W. HEWITT, Detroit: I wish to ask Dr. Thorek if he will discuss the practical side of the question. Also, if he would not mind, I wish he would mention that famous case in Chicago and the results therein. I think the operation was performed by Dr. Lespinasse. I would also like to have him discuss the Steinach operation.

DR. WALTER F. MARTIN, Battle Creek: I wish to ask Dr. Thorek to discuss the relation of the Steinach operation to the Leydig cell, and what relation that has to the transplant.

DR. MAX THOREK, Chicago, Illinois (closing): The question of Dr. Martin as to the relation of the Steinach operation to the Leydig cell, as you all know, gentlemen, Steinach's procedure consists in dividing the vas deferens, paying particular attention to the deferential artery. The Steinach procedure is that when you cut the vas deferens you have done nothing, you must preserve its delicate arterial supply. You get a spermastasis according to Steinach that causes a stimulation of the interstitial structures—an hypertrophy. In his experiments upon rats and guinea pigs he showed some very interesting specimens to me in

his laboratory in Vienna. The only thing I took exception to—I would have appreciated it more if he had shown me microphotographs instead of drawings. Steinach's work has been tested out after the laughter has died away, and the results are being listed, some by Teegarden published in the last few months, and by some of our American contemporaries.

Dr. Hewitt has asked about the practical side of transplantation. So far as that is concerned I wish to emphasize that when a man comes to me who has been in the war and whose testes have been torn away by a shell, and who is becoming fat and losing his hair and becoming eunuchoid, I say that practically speaking, this man is suffering a deficiency of secretion just as a woman is who loses her ovarian incretion and it is our solemn duty in such and in similar cases where the trouble rests in the deficiency of testicular hormone incretion to furnish that hormone to those individuals by any method available. In the eunuchoid child, the child suffering from Froehlich's syndrome, where there is distinct evidence of eunuchoidism, in loss of tuberculous testes, in fact—in all the cases where I find a man is suffering distinctly from a deficiency of testicular hormone—the patient should be given the benefit of transplantation.

I have enjoyed reading the works of Dr. Hirschman from time to time and am glad to see that he is in possession of all his faculties and a very brilliant speaker. He had the pleasure of meeting my friend Voronoff, who is, as I know him, a sincere worker, a scientific observer and a man of high ideals and sterling principles, just as Brown Sequard was, who died in obscurity because men laughed at him. They laugh at him no longer. He is the acknowledged father of endocrinology. Of course, they are enthusiasts, but they are enthusiastic at the Mayo Clinic about Lugol's solution in thyrotoxicosis, and it is the same with every new method. We must have criticism because we learn by criticism. If Voronoff is a bit over-enthusiastic he is no more so than any man who works to see his labors crowned by success.

I am delighted that Dr. Robbins spoke of Dr. Lydston, who was the pioneer in transplantation. I examined Dr. Lydston, at his request. He had the moral courage to transplant testicular tissue into himself. He had the courage of his convictions and transplanted a testis into his own scrotum and he was enthusiastic until the day he died. His enthusiasm he believed was justified. Why did he not get results? He transplanted the testis into the scrotum and that is a very poor place to transplant a testis. I told him so, we disagreed, but that does not mean that he was not a brilliant man. It is up to us younger men to work out and improve on older methods. Where will we get our material? Dr. Lydston got his from individuals who had died by accident and he first ascertained that those individuals were free from taint, syphilitic and otherwise. He proved that where those tissues were removed and kept on ice for seventy-two hours they retained their biochemic elements and could be used for transplantation. Stanley, of San Francisco, has taken these tissues and put them in vaseline and frozen them. I would never advise any physician to have a man or woman part with any of their organs, but I have no dislike to taking these tissues from dead bodies of individuals who have died by accident and using them for the benefit of the living.

Without criticism we cannot learn and I predict that transplantation, not only of the testis and ovaries, but of other endocrines, such as the parathyroid, thyroid, adrenal, pituitary and other organs of internal secretion has a future in clearly indicated cases, just as have other now recognized methods of rational therapy.

I wish to thank you, Mr. Chairman, and all the gentlemen for their kindly discussion of my paper.

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CLINICAL SIGNIFICANCE OF JAUNDICE

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Jaundice is best defined as a staining of the tissues and body fluids with bile. In a few diseases and in many more instances our knowledge begins and ends with that simple definition. Medical progress has cleared our nosology of the many varieties of jaundice that were very useful to our predecessors, but such terms as catarrhal jaundice, icterus gravis, congenital family icterus and icterus neonatorum still persist. In our average run of patients we frequently see the sick where we would like to apply some of the old time convenient names, but our training and inborn curiosity for causes make us look further and search out a reason, thereby applying more precise and descriptive terms to the disease at hand.

In searching out such causes we meet difficulties, for the whole subject is obscure and physiologists have told us little as to what bile pigment is, less of where it comes from and nothing as to what it is for.

Chemical formulae may be found in abundance, but they help us very little for bile pigments in the body and intestines are elusive and changeable things, so that laboratory studies of patients bring little help to the clinic. In fact, we are obliged to deal with bile pigments in the same chemical procedures that were introduced when unqualified jaundice was a frequent household disease. In the last 20 years I believe that but one fundamentally new thing has been produced in the chemical understanding of jaundice, and that is the discovery that carotin, a pigment derived from green and yellow vegetables, may so stain the blood and skin as to simulate jaundice.

*Read before Section on Medicine, M. S. M. S., Mt. Clemens, Sept., 1924.

Our knowledge as to where bile pigment comes from is troubled with uncertainties and doubts. We all believe it mostly came from the liver until Whipple found that it could be formed from blood pigment by serous membranes and blood vessel walls without the aid of the liver, but now the Rockefeller workers claim that, in the so-called head circulation experiments of Whipple, the liver was not excluded. Lately Mann of the Mayo Foundations finds that in definitely de-hepatized dogs, which may live 16 hours, bile pigment accumulates in the circulating blood, and we must reserve our judgment as to whether bile pigment is a secretion of the liver or a substance formed elsewhere to be excreted by the liver. Even a very useful idea that bile pigment is absorbed into the portal blood to do duty again in the liver is much in doubt—which makes our work with urobilin half-hearted and increases our difficulties in understanding the formation of blood pigment.

As to what bile pigment is for, we know only that it serves to cause much trouble for clinicians and much work for experimenters.

Without knowing more about the first principles of bile pigment, I embarked—possibly unwisely—a number of years ago to study the behavior of bile pigment in the various types of jaundice, hoping—as in fever and leucocytosis, equally obscure phenomena—to give jaundice as a symptom more clinical usefulness.

By animal experimentation, principally obstructing experiments of short and long duration, on dogs and by injection of bile and blood pigments, we were able to see something of the behavior of displaced bile pigment in the body. And by examination of the blood, urine and stool of many patients at frequent intervals where the pathology of the disease at hand was understood, jaundice began to be more than a name.

The methods for such observations are not good when quantitative determinations are needed, but they are good enough to be useful and better than none.

For the blood the direct estimation of the yellow color of oxalated plasma serves very well. Originally I measured the amount of bile pigment by diluting the plasma till the yellow color disappeared in a column 1 cm. deep and recorded the number of dilutions. In order to harmonize with other writers and because it is a better way, we are now using the Muhlengracht standard, which is a 1:10,000 solution of potassium dichromate. This represents the color of normal plasma and the unknown is read directly against and expressed in terms of the standard. This is a better method, because our internes at Lakeside Hospital can learn it quickly and make uniform estimations that can be checked.

This device seldom goes wrong; traces of hemolysis in the specimen disturb it but little, for hemoglobin has weak staining properties and the process of diluting dispels the red, leaving a yellow that usually matches the standard.

Carotin can lead to confusion here, and as carotinaemia is suspected only when a diet rich in colored vegetables has been taken, carotin can be ruled out by the selective solubility of the pigment in benzine. Carotinaemia is uncommon in adults save diabetics, and usually can be differentiated by the excess of jaundice in regions where the skin is thick and the scanty color where skin is thin. True jaundice shows most in the palms and less in the sclerae.

While this method for blood has not the very convincing accuracy that is supposed to go with methods expressed in milligrams per kilo, it serves well to compare the degree of jaundice with that of another case, and what is more useful, to gauge the progress of cholaemia.

No satisfactory quantitative method for bilirubin in urine has been found for patients. Where large amounts are present some have used the green color that develops with acid, and read it against an artificial green standard; but in my hands this green color is uncertain and where small but important amounts must be measured, the urochrome color of the urine interferes. Inasmuch as all pigment that comes in the urine finds its way through the blood, we rely principally on blood determinations. Bile pigment is a threshold substance —that is, it has a normal concentration for blood before it passes the kidney. This threshold may be greatly raised, but I think never lowered, so that we are always safe in estimating jaundice by the bile in the blood.

This does not apply to urobiline—and unfortunately, for this pigment we have a good method for urine—and much use may come of it. The method is that of Wilbur & Addis. It is fairly reliable, but rather troublesome, requiring a spectroscope.

The natural road for bile pigment is the intestine, and the vehicle the stools. It arrives invariably for our examination as stercobilin, which is identical with urobilin, and is measurable by the same method.

Under unusual circumstances only does bile hurry so rapidly through the intestine that we see it as bilirubin or biliverdin. The daily collection of 24-hour quantities of stool and process of extracting an aliquot part of its urobilin and the measuring of that extract is an onerous task, but useful information often comes

that way. We have done many hundreds of determinations and have learned that the gross appearance of stool, which is the common method, is a poor guide to its bile content. And better still, troublesome and inaccurate as it may be, this method gives a gauge of the changes in amount of bile presented to the intestine. By following and checking this method, by estimating the bile content of the duodenum, we have learned much about the normal behavior of bile in the intestine. We now know that considerable bile can find its way into the duodenum and none be in the stool. In one instance of so-called complete biliary fistula, I was obliged to return 6 to 8 ounces of fistula bile to the duodenum before any showed in stool. And we have learned further that in absolute obstruction there is little reason to believe that much bile finds its way into the intestine by way of the intestinal mucosa, for a tube deep into the small intestine does not bring it up.

Therefore with knowledge of the output of bile in stool and knowledge of amount in blood, we have a good idea of the amount of bile formed by the liver and where it is going, and that is useful in the study of a case of jaundice.

From the animal experiments mentioned and from seeing many clinical problems, I am impressed with the following points as to the behavior of bile pigment as a staining agency in the body.

That it is commonly present in the blood of normal individuals, in varying amounts. It may be there in simple solution or in combination with protein—when in small amounts always in combination with globulin—when in larger amount with both globulin and serum albumin.

Being so disposed in the blood stream, it must reach a certain concentration before it escapes to the tissues to produce jaundice, and still larger amounts before it escapes through the kidney to produce choluria.

The proportion of bile in combination with protein to the bile in simple solution is variable, and varies with the rate of influx of bile into the blood; the slower the influx, the more there is in combination and the less in simple solution. When bile is rapidly passed into the blood, this proportion is altered and more is in simple solution.

Apparently an appreciable time is required for pigment to stain the protein, and if the rate of inflow is rapid much is in simple solution and little fixed to protein. To impress this point as illustration, see a rapidly developing icterus from complete obstruction; here bile appears in urine almost the same time it can be seen in the tissues. There is much pigment in the blood which protein cannot absorb; hence it spills through into the urine. An example of the slow staining process take chronic diseases of the liver where frequent small doses are thrust into blood over long periods of time. If the blood has ample time to take up pigment, then there may be a high degree of jaundice and cholemia without choluria; it is in this manner that acholuric jaundice occurs. I have shown that the pigment in so-called acholuric jaundice is not in simple solution, but always attached to protein, but I believe this sort of bile pigment is in no essential different from that that enters the urine.

Tissues may also in some manner absorb pigment, but never in excess of blood; that means that tissue jaundice never exceeds blood jaundice. Even where jaundice is rapidly clearing, the blood shows the staining longer than do any tissues. Consequently it is inconceivable to ever find a jaundiced individual without cholemia. Frogs when dehepatized may be an exception to this, but dogs and rabbits have not been.

Realizing that pigment exists in blood in combination with protein before it does in simple solution and that only in simple solution can bile pass through the kidney, we see why choluria is impossible without cholemia. Also knowing that bile rapidly thrust into blood can remain in simple solution for a time before blood can take it up and dispense it to tissues, we see how choluria may result from this excess before jaundice of tissues is visible. Dogs may be an exception in this respect that choluria happens very commonly without apparent cause, for there may be a very low threshold for pigment at the kidney.

Urobilin, although much studied and little understood, occasionally occurs in blood and very often in urine. It is apparently a much more diffusible substance, and only when produced in enormous amounts or when the kidney is seriously damaged is it found in blood. From my limited experience I venture to say that it is so readily diffusable that it rarely is retained in blood in sufficient amount to be detected, although large amounts appear in urine. It can occur in blood as a colorless substance. It may contribute to the yellow color of urine, but not until urine has stood in air and light for a time. It is not a cause of jaundice. In all cases studied, where urobilin was found in urine or blood, and jaundice existed, bilirubin also was found sufficient alone to cause the jaundice. Using the methods described, the following clinical conditions were studied and results obtained.

CHOLELITHIASIS WITHOUT OBSTRUCTION

Nothing has been discovered to aid in the

diagnosis of gallstones that produce no obstruction.

CHOLELITHIASIS WITH OBSTRUCTION

Obviously it is impossible to time the onset of obstruction or the degree of obstruction. Taking colic as the sign of obstruction, 12 to 24 hours are required before pigments occur in blood. If obstruction is complete and persists, choluria may appear within 24 hours and be coincident with jaundice. Few patients enter the hospital so early as 24 hours after onset of colic; so these figures are gathered from few and scattered cases. If obstruction persists and cathartics are given, the second stool may be pale and the third acholic. As days go on, cholemia and jaundice and choluria increase, while acholic stools continue. Granted that the liver has not been previously damaged and obstruction is complete, jaundice continues to deepen and choluria increases until the patient is green. Apparently obstruction of short duration—weeks—does not inhibit secretion of bile, and patients uninterrupted go on and die with daily increasing jaundice. In this situation the liver may not be much increased in size and may not be tender. When this obstruction relieves itself, the first change is in the stool. If obstruction is completely released, urine begins to clear—then blood and tissues together—the blood clearing last.

When obstruction is partial or intermittent, jaundice may be stationary for days or weeks; if infection is present, as often is the case, the liver enlarges and the secretion of bile diminishes in total amount. In partial obstruction a balance may be found where kidneys are able to remove bile as rapidly as it is formed, but this is always while the patient is deeply jaundiced.

In obstruction of very short duration, as in colic lasting a few hours, there may be no abnormal distribution of pigment whatever. At any event examination of blood after attacks of abdominal pain have been of little value in diagnosis of cholelithiasis when obstruction may be absent or of short duration only. Urobilin rarely is present in urine and never in blood in obstructive lesions. Rarely is it present in urine as a result of cholelithiasis alone. One rule of procedure that urobilin never violates is to appear in urine when not in stool. In intermittent or partial obstruction, when there is bile in intestines and liver is enlarged, urobilin often appears, but not in large amounts.

CATARRHAL JAUNDICE

Catarrhal jaundice at onset invariably resembles obstruction, but may not be abrupt —stools may take a week to become completely acholic—during this time jaundice and cholemia are stationary. Stools may keep acholic for a week and in this time jaundice continue to be stationary, but urobilinuria which was present at the onset disappears. As improvement takes place, bile comes back into stool, disappears from urine and gradually fades from blood, but urobilin in the meantime increases in the urine. Following an attack of catarrhal jaundice and in the period of fading jaundice, there may be unusually large amounts of bile in stool and much urobilin in urine. This may never occur or may last but a few days.

Catarrhal jaundice may never show acholic stools, but only a degree of hypocholia, in which case the degree of jaundice likewise is mild. When stools become completely acholic, jaundice and cholemia are generally marked—never as severe as in common stone or carcinoma of the ducts —but there is enough correspondence between the fall of intestinal bile and the rise of cholemia that obstruction is very plausible. On the other hand, the apparent suppression of bile secretion at times, together with the incidence of urobilinemia, indicates more than obstruction—that is, considerable disorder of liver parenchyma.

LAENNEC'S CIRRHOSIS

There may be gross deformity of the liver without anomalies of pigment. Most of the cases observed were jaundiced. Out of 18 cases which I reported in 1918, 5 showed a distinct diminution of bile in stool, while blood showed an increase, thus indicating a degree of obstruction. None showed intestinal acholia. With acute exacerbations of jaundice, situations arise resembling catarrhal jaundice. Three cases showed a marked falling off of bile from the stool, at the same time with diminishing amounts in blood and none in urine. This proved definitely a failure of production of bile—something quite foreign and perhaps impossible in pure obstruction. This illustrates what can be done in obscure cases of jaundice to work out the problem, once we become familiar with a large group of cases.

HANOT'S CIRRHOSIS

Three well established cases were studied in 1918 and several less marked cases since. Here it is amazing how great may be the evidence of liver disease as shown by size and shape of liver and spleen, and how little disturbance in pigment function results. Several cases showed intestinal hypocholia —at the same time with moderate icterus and no bile in urine. I think the principal disturbance in pigment here is a diminished production.

PNEUMONIA

Jaundice, cholemia and choluria may be very high and the onset abrupt, as in obstruction, but of the many cases studied, none ever showed intestinal acholia or even hypocholia. A large number showed quite the contrary, a marked increase in stool output. There is an overproduction in pneumonia. Many showed what is very unusual, a large amount of urobilin in blood and urine. None showed urobilin in blood without urobiluria. None showed urobilinuria without icterus. The appearance of so much urobilin in pneumonia is very puzzling and very interesting. It suggests that along with the overproduction of bile there is disorder of liver function. Neither the location of the pneumonia nor the severity had any relation to icterus. The type of infection was almost invariably shown to be pneumococcus. Icterus in pneumonia seems to be a particular manifestation of pneumococcus infection. In many respects it resembles pernicious anaemia and malaria, except that we could detect no destruction of blood cells or disappearance of hemoglobin.

PERNICIOUS ANEMIA

Jaundice here is always mild, always chronic. Nearly all cases, whether or not jaundiced, show a moderate degree of cholemia; not ONE showed choluria. All showed normal or excess bile in stool. The highest stool values ever found have been found by us, as by others, in pernicious anaemia. There is here an overproduction of bile and an *unnatural substance* formed, as shown by much urobilinemia. Strange to say, although many were jaundiced to quite high degree, and much bile appeared in stool, never was there choluria. Apparently in this case the chronicity and slowness of the staining process permits all the pigment to be fixed to the serum so that none can be filtered through the kidney. The kidney function for other dyes was frequently tested and little disturbance found.

Urobilin in pernicious anaemia shows its characteristic behavior—that is, much in urine and stool, but none or very little in blood. Apparently it all leaks through the kidney so rapidly that it cannot be detected in blood. One must conclude, therefore, in pernicious anemia that, although the lemon-yellow color is due to bilirubin—bilirubin never shows in urine—and that the urobilin, which is so abundant in stool and urine, never makes the patient yellow.

SECONDARY ANEMIA

No jaundice apparently results from anaemia alone, for in uncomplicated anaemia the plasma is normal. It is true that many were suspected of jaundice, but this unnatural color is a result of pallor. In the pallid individual the natural pigmentation of the skin is exaggerated by contrast and jaundice is not real.

TAENIASIS

Four cases of infestation with fish tapeworm have been studied and cannot be differentiated from pernicious anaemia by the distribution of their pigments. Other cases of taenia showed no characteristic findings.

EMOTIONAL JAUNDICE

This I mention merely to say I have never seen it and do not believe there is such a thing. At least, it is inconceivable that from emotion or from any other agency one can instantly, as is said, become deeply and completely stained with bile pigmment. Dogs, when injected with impossibly large doses intravenously, require an appreciably long time for bile pigment to diffuse out of the vessels into lymph spaces to produce jaundice.

SALLOWNESS AND BILIOUSNESS

Women patients tell me they are jaundiced for a few hours of the day, or that an attack of jaundice lasted but a few moments. Others say that they are bilious and have a yellow complexion when constipated. Very few of these same people show abnormal pigment in blood, and none in urine. If they do look yellow, it is due to transient pallor, probably a vasometer phenomenon. At least, they have not proven up as really jaundiced.

I have studied but one case of acute yellow atrophy, and that prior to my observation behaved as catarrhal jaundice, but a rapidly increasing jaundice and cholemia accompanied by collapse, sent her to hospital as a case of obstructive jaundice. I was deterred from having her operated by the fact that her rapid increase in jaundice was not accompanied by complete intestinal acholia, and autopsy a few days later disclosed the real condition.

I feel that we have not had opportunity of studying this condition often enough to say more. For the same reason I hesitate to say anything about congenital family icterus, Weil's disease, malaria and yellow fever. Icterus neanatorum also does not come to our hospital.

This occasion does not permit me to do more than describe how jaundice might well be studied. Before I can profitably take more time, more cases must be studied.

I can summarize best by going over again the schemes whereby the most pointed problem may sometimes be solved—that is the

differentiation of obstructive jaundice from nonobstructive.

In obstruction, bile pigment appears first in blood, then in tissues and in urine; meanwhile it disappears from stool. In pure obstruction it continues to increase as time goes on, for obstruction does not materially inhibit the formation of bile.

In nonobstructive jaundice of rapid onset, stools are not acholic. When of slow onset, stools may be hypocholic, but when so, blood and tissue jaundice is not increasing, for in this situation pigment formation is diminished and blood and tissue jaundice is either stationary or actually decreasing. Their diminishing formation means liver disease.

Urobiliruria also means liver disease. Acholuric jaundice means liver disease, but this liver disease may be due to intermittent obstruction and infection, such as cholelithiasis.

DISCUSSION

DR. L. M. WARFIELD, Ann Arbor: It has been exceedingly interesting to hear Dr. Blankenhorn talk about jaundice, as it is always interesting to hear anyone talk about the subject upon which he has worked for a long time and upon which he speaks with real authority.

There is one question I would like to ask Dr. Blankenhorn. In the first place, does he consider the qualitative test for urobilin in the urine as performed with the Ehrlich reagent of real clinical value? In the second place, is it possible to gauge in any way the amount of liver damage by the simple qualitative test and the color reaction with this reagent?

There has been so much said pro and con about the diagnostic value of urobilin in the urine that although I heard him say a few moments ago that urobilin was increased in the urine where there was liver damage, still I would like to hear him say a little more definitely about this in answer to the question asked.

I certainly have enjoyed this paper very much.

DR. M. A. BLANKENHORN, Cleveland, Ohio, (closing): In answer to the first question, I feel the qualitative test of urine is of mighty little clinical use. I think it is for much the same reason that for a long time simply the fact that a patient was jaundiced was of little use. We didn't know much more than that the patient was yellow. If we study it long enough, it may become of value.

Taking a situation like pneumonia, I believe we get our very highest determinations in the urine in pneumonia. Certainly the highest in the blood. We acknowledge that the liver may be damaged to a certain extent very acutely by pneumococcus infections. Yet there is no permanent damage at all.

In pernicious anemia, where we get tremendous amounts of urobilin, the liver shows damage. I have no way of making an estimate of the functional capacity of the liver. A patient may come in with a liver the size of two fists and be two weeks ahead of his demise. We apply liver function test and in two weeks he may die and we find a liver as big as two fists. And we thought all the while he had a liver perfectly good for any emergency.

RESUSCITATION FROM ELECTRIC SHOCK*

(Universalize the One Best Method.)

W. L. FINTON, M. D., F. A. C. S.
JACKSON, MICHIGAN

Resuscitation from electric shock has lately received considerable interest and publicity. A short time ago The American Medical Association joined the National Safety Council and the National Electric Light Association, in putting this subject before the public. And, as you know a Resuscitation Symposium was given at the last meeting of the American Medical Association.

This subject may seem to some rather commonplace, but a wide survey of the state has shown a general lack of practical knowledge not entirely confined to non-medical persons.

While we are daily reminded of the number of deaths from automobile accidents, we should not overlook the deaths from drowning, gas axphyxiation and electric shock. About 10,000 lives are lost annually in the United States through this class of accidents. Such fatalities are generally given less prominence in the newspapers, but continue to occur steadily throughout the year. Insurance authorities estimate that modern methods of resuscitation, promptly applied, would have prevented 70 per cent of these deaths.

Having been for some time associated with a large utility corporation, supplying electric power and light to various communities, scattered over a wide area, we have become somewhat familiar with electric shock cases, and realize the need of teaching resuscitation to laymen as well as physicians. Electric service has become today one of the first essentials in the life of civilized man. After food, clothing and shelter, mankind living in cities, gets more comfort and help from electricity than from any other of life's commodities. (Today the public utility industry is the third largest industry in the United States in amount of invested capital.) The larger percentage of persons whose deaths occurred from electric shock and lighting could have been saved had their associates been *workingly* familiar with the prone Pressure Method of Artificial Respiration.

Low voltages up to about 220 volts cause fibrillation of the heart, while high voltages cause paralysis of the respiratory centers.

*Read at Annual Meeting, M. S. M. S., Mt. Clemens, Sept., 1924.

There is no divergence of opinion as to the urgent need for immediate action; i. e. Prone Pressure Artificial Respiration should be applied promptly and continued in a proper manner. This must be thoroughly tried out, before any attempt is made to transport the patient to the hospital.

HISTORY

In 1908, Prof. E. A. Schafer of Edinburgh read a paper on his Prone Pressure Method before the American Medical Association. The conclusions reached were, "that, a pressure method is best and that such a method is more efficient with the patient in a prone position and with the pressure applied vertically over the lowest ribs." (see illustration), While his method was known and employed in this country before 1908, it gained but little headway over the

"OUT-GAS"

While slowly saying "OUT-GAS," lean forward slowly with arms straight, so that your weight is placed on the patient's lowest ribs. This should not be a violent motion.

"IN"

While saying "IN," remove weight and swing back quickly.

"COMES-AIR"

While saying "COMES-AIR," rest; all pressure should be removed from patient's ribs.

This method of artificial breathing is very simple and easy to learn. Repeat it slowly, about which means breathing out and in, should take twelve times a minute. A complete respiration, five seconds. GO SLOWLY, time yourself, one second to each word.

OUT—GAS—IN—COMES—AIR

other methods until the various commissions of the National Electric Light Association adopted the Shafer method as standard. Up to this time when an emergency arose a number of methods were frequently tried for short periods of time, with resulting confusion and high mortality. After fifteen years of successful achievement the Prone Pressure Method has come into use as the method of choice for artificial respiration.

The following is quoted from a letter by Prof. Schafer written in response to a recent inquiry.

"The Prone Pressure Method has been adopted *exclusively* for about twelve years by the Royal Life Saving Society, the only important organization in the British Empire whose object is the resuscitation of the apparently drowned. It has also been adopted for several years by the London and other police forces, by the Board of Trade and by the Army and the Navy. The most important thing in cases of electric shock or drowning is to have something ready which *any* man can use; which will effect respiratory exchange—whether exactly as much as normal, matters very little."

TECHNIC

The technic is well known to you. The patient is placed prone. The mouth is quickly cleaned of foreign bodies. The patient's arms are outstretched, one under the head.

The operator kneels straddling patient, just below the hips. He places the palms of his hands with thumbs close to the fingers and the fingers parallel over outer end of the two floating ribs, well out from the spine, *the small fingers resting on the lowest ribs.*

With arms straight and bending only at the hips the operator compresses, releases and swings back. This is repeated about twelve times to the minute. Swinging forward and compression should occupy two seconds while swinging backward and resting should take the other three seconds of a five second period.

FIVE SECOND PERIODS

1 Out	2 Gas	3 In	4 Comes	5 Air
Lean forward, not violently, applying weight to patient.		Remove weight and swing back quickly.	Rest	

In the report of the resuscitation Commission appointed jointly by The American Medical Association, the American Institute of electrical engineers and the National Electric Light Association, and in which the technique of the Prone Pressure Method is elaborated, it is advised that "Persons receiving artificial respiration should, as much as possible, be kept warm, and the artificial respiration should be maintained until spontaneous breathing has been permanently restored, or as long as signs of life are present. It was first thought that in cases where there is no sign of returning animation, artificial respiration should be kept up for an hour or more. Later experience

has shown that there is hope in some cases where there is little or no indication of life after a much longer period of time. One case has been reported where life was restored after three and one-half hours of effort, and it is recommended by the commission on Resuscitation from Electric shock that artificial respiration be kept up for four hours unless rigor mortis has definitely set in.

A considerable number of cases of electric shock have been restored after one and one-half hours of work. Gas poisoning cases have required artificial respiration for as long as nine hours. Signs of life and shallow breathing had of course been elicited before this time, but disappeared as soon as artificial respiration was stopped. It is of the utmost importance that artificial respiration be started promptly after the accident. The first few minutes may decide the matter of life or death of the patient, and certainly ten minutes of Prone Pressure respiration started early may be of more value than hours of effort later on.

On return of normal respiration the patient should be carried gently on a stretcher, put into a warm bed and treated with the same care as in traumatic or surgical shock. The heart has been put to a severe test, and even letting patients *sit up immediately* has resulted in death.

POPULAR MISCONCEPTIONS

Many still resort to the practice of tapping the soles of the feet or apply "countershock" in various ways, such as picking the patient up and dropping him several feet. Correspondence with prominent industrial surgeons has shown a difference of opinion on this point. Many feel that such procedures are unsurgical, while others hold that moderate stimulation, even dropping the patient a short distance, may be of real value. It is certain however, that such rough procedures as rolling the patient on a barrel and repeated drastic efforts at artificial shock are obsolete and contraindicated. The patient should never be made to walk as soon as he is revived.

Unfortunately extensive advertising has made the majority of lay individuals and many physicians seek mechanical devices in cases of electric shock and drowning. There is still an insistent popular demand, reflected in the attitude of civil authorities, for mechanical devices for artificial respiration.

ATTITUDE OF POLICE AND OTHER CIVIC AUTHORITIES

When emergencies arise, civic officials, particularly of the fire and police departments, are usually at hand or among the first to arrive. While skilled in handling ordinary accident situations, experience has proven that a majority of their members are woefully deficient in the training necessary for the resuscitation of unconscious persons. Here is a broad field for missionary work. The public utilities have taken this matter in hand and have given instructions in the Prone Pressure Method to many civic employes, but this is a matter in which the medical profession should also come to the front and see that the firemen and the policemen in the various communities are given these instructions, and that the efficacy and importance of the Prone Pressure Method is fully understood by the public.

As examples of this civic mis-conception, picture the following actual cases. A lineman in one of our larger Michigan cities received a severe electrical shock. According to the signed statements of his fellow employes, work was begun immediately on the unconscious man and after fifteen or twenty minutes application of the Prone Pressure Method he was breathing nicely and his color was good. There was every reason to believe that he would survive. Then the police arrived with a pulmotor and took charge. They insisted on using the pulmotor. The victim immediately changed color, became black in the face and ceased breathing. After twenty minutes the doctor had them resume the Prone Pressure, which was kept up until the doctor pronounced the man dead.

In another city in Michigan a workman received a severe shock and was seriously burned by contact with an energized high potential conductor. The Prone Pressure Method was immediately applied by his foreman. A physician was called and on arrival pronounced the man dead and ordered the efforts to resuscitate him stopped. The foreman refused to do this, on the ground that if the man was dead no harm could be done to him, while if he still had a spark of life there was a chance of saving him. The foreman continued his efforts until, after a considerable time the man was restored to consciousness. Then the physician asserted that the patient could not live, but this man is still alive, and with the exception of the loss of one arm, amputation of which was necessary from the effects of the burns, is in excellent health.

Another case in point is that of a man in one of our eastern states, who was pulled out of a river in an unconscious condition. A crowd quickly gathered and a police officer was doing his best to maintain order when a schoolboy edged in and announced that he was a boy scout and knew how to apply the Prone Pressure Method to restore respiration. He was gruffly ordered away by the policeman. Just at that moment the boy caught sight of the

unconscious man and recognized him as his own father. His insistance, supported by the sympathetic attitude of the bystanders, overcame the policeman's objections and the boy set to work. He was interrupted by the arrival of the ambulance. The attending physician pronounced the man dead and ordered the body to be removed. The boy, knowing that this was not the time to give up, and having the courage of his own convictions, insisted on going with his father and working on him in the ambulance. This was permitted, more in the spirit of tolerance than in the hope that any good would result, yet the boy succeeded in restoring his father to consciousness before the ambulance reached the hospital, bringing him back, literally, from the very shadow of death.

In fact there are hundreds of cases every year in which the attitude of our civic representatives varies only in detail from these. They go to show the necessity for the broad dissemination of knowledge of the Prone Pressure Method among our civic officials.

It is possible that physicians sometimes make the above mistake because of the fact that the patients whom they are accustomed to see stop breathing, are truly and permanently dead? "While in the class of cases under discussion the patient can be compared to a good automobile, which is stalled and only needs cranking." A hypodermic in these cases is of no value whatever.[1]

Because of the above and other similar experiences we have found, in several instances over the state, that when electric shock cases occur, there has been a marked hostility on the part of workmen toward the doctor, for fear he was going to oppose the Prone Pressure Method. We mention this, not in the spirit of criticism, but so that we may know what to expect when called on these cases. Many of these workmen have been instructed and trained in this method by their employer and they feel that there is something radically wrong with the doctor who does not permit the use of Prone Pressure on an unconscious fellow worker. We physicians can correct this attitude, and are correcting it, by assuring such men that we do approve of the Prone Pressure Method in cases where its use is indicated, and by encouraging the men to drill regularly and be prepared for the emergency when it arises.

EXPERIENCES (OF PUBLIC UTILITIES) WITH MECHANICAL METHODS OF RESUSCITATION

For twelve years the Public utility with which we are associated kept mechanical devices, either pulmotors, or lungmotors, or both, at each of its larger stations. In the thirty-two cases in which these devices were used during the 12 years, only one case recovered, and there is considerable question, as to whether or not he would have recovered without the treatment, inasmuch as he was able to climb down the pole unassisted after receiving the shock before collapsing. Like many other corporations, we have scrapped all of our mechanical devices in favor of the Prone Pressure Method.

In many of these cases, but patricularly in poisoning from illuminating gas, the administration of CO_2 (5 per cent) with oxygen (95 per cent) is of decided benefit. The condition of acapnia is more quickly relieved. However, Prone Pressure must be started immediately and kept up and no time should be lost in waiting for respiratory supplements as carbon dioxide, oxygen or aromatic ammonia.

Dr. Yandel Henderson of Yale recently reported that the use of carbon dioxide with oxygen in cases of alcoholic coma had entirely eliminated the pneumonia, of which complication, up to that time 33 per cent of the cases had died.

ADVANTAGES OF THE PRONE PRESSURE METHOD

The advantages of the Prone Pressure Method are well known, but a brief summary may be in order.

1. Prone Pressure is very simple, it is easy to learn and easy to apply.

2. It needs but one operator. It is the only one man method, and it can be applied by anyone who can work continuously for an hour or more. There is no need of a second person to hold out the tongue, as is the case with the Sylvester and other older methods.

3. It is usually immediately available. No time is lost while waiting for mechanical devices, or attempting to repair them when found out of order, as is frequently the case. They are, at best, inadequate and unphysiological.

We timed a man who had some years before used a pulmotor on a few occasions, and found that it took him six minutes to refresh his memory and get the machine working, and then it leaked badly.

All mechanical breathing apparatus is subject to rapid deterioration, especially in the numerous parts that are made of rubber. Leaks and breaks are common, so that without frequent inspections and replacements they are not serviceable.

4. The Prone Pressure Method is more effective than any other method of resuscitation. With normal deep breathing taken as a 100 per cent, the Sylvester method gives about 35 per cent (175 cc.) of normal ventilation of the lungs, while in the Prone Pressure

1.—Symposium on Resuscitation—American Medical Association—Dr. Yandel Henderson, et. al.

Method 105 per cent (515 c.c.) of the usual tidal air is exchanged at each manipulation.

This method elevates the diaphragm and forces blood from the liver and splanchnic area to the heart. The heart, which is always contracted (empty) in electric shock, is thus filled and the cardiac function stimulated, holding out the great prospect of restoring animation.

5. There is less danger of rupturing the lungs and blood vessels than in any of the mechanical methods. Mechanical devices require a degree of pressure to inflate and of suction or vacuum to empty the lungs, that is incompatible with physiologic breathing. Prone Pressure more closely simulates natural breathing than any other method of artificial respiration, manual or mechanical.

DISSEMINATION OF KNOWLEDGE OF THE PRONE PRESSURE METHOD

All employes of public utilities and other industries in which extensive use is made of electrical energy should be, and very generally are, instructed and drilled in the Prone Pressure Method. When each man feels that his life may depend on the other fellow knowing how to do this, he is going to learn it himself and see that the other fellow also learns it. Truly in this instance each man gives an affirmative answer to the question; "Am I my brother's keeper."

Besides electric shock, drowning and poisoning, one should bear in mind that artificial respiration may be useful in unconsciousness from blows on the head, "cave ins," drug poisoning, such as morphine, freezing, and the ever increasing, carbon monoxide poisoning from gasoline motors.

A bill was introduced last February in the Senate of the State of New York to make the teaching of the Prone Pressure Method compulsory in the public schools. Many large organizations, including the American Red Cross, the Boy Scouts and the Campfire Girls, teach this method as part of their regular first aid program. It is also standard in the Army and Navy and, with some modifications in the Coast Guard.

It is not sufficient merely to know what Prone Pressure is. Every person, phyiscian and layman, boy scout and campfire girl should *practice* it, and become so proficient that when the day comes for its use they will comport themselves in a manner consistent with modern scientific attainment.

Seventy per cent of the successful cases of resuscitation were performed by the workmen themselves. This is of course because of the availability of the fellow workman. Therefore it is incumbent upon all industrial physicians, and in fact upon all physicians, many of whom have long used the Prone Pressure Method, to *advertise* it and to *teach* it to the public.

In this important measure for public safety and the saving of life, physicians have a truly patriotic duty to perform, for the more laymen who are trained in this simple and effective first aid measure, the fewer fatalities there will be from these accidents, for the relief of which artifical respiration is an immediate necessity.

DISCUSSION

Dr. ROBINSON, Jackson: I haven't very much to say about the paper. It was excellent. I have used the Sylvester method more than the other perhaps. It was earlier. We used it more. I never had any good results from its use. I have with the method described.

The pulmotor appeals to the people, and you will be always urged to use it. It is something mechanical and it is something advertised. That is about all there is about the pulmotor, the advertising. I have not seen it work well in any case I have tried.

We have with us today the secretary of the National Electrical Association that has the accident part in charge and has been in that work for about ten years. I believe if he were allowed to say something it would be helpful. He is not a physician but has had probably more experience than all of us together.

MR. H. J. BURTON, National Electrical Association: He said I was secretary of the National Association. I am chairman of the Accident Prevention Committee of the Great Lakes Section. I am an electrical engineer. I have had a lot of experience with electrical shock cases.

I thoroughly endorse everything Dr. Finton has said.

I can quote you a number of successful cases where men have received electric shocks, as much as 70,000 volts, burned very severely, and have been resuscitated by this method in a few minutes.

I can quote cases of boys climbing poles and receiving electric shocks and being resuscitated by this method.

Years ago a small boy, about five years old, climbed a fence and in some way got in touch with a low voltage circuit. His mother was called. She couldn't do anything to save him. She attempted to, but got a slight shock herself. Then a substation operator near by grabbed this boy by his clothes and pulled him off. In about twenty minutes he resusitated him.

There are several cases where it has been applied successfully. Two weeks ago, two boys were resuscitated. I have known of several cases where the method has been put in practice by fellow employees and it has been interfered with by physicians. They said it was of no use and have sometimes stopped the method from going on. Whether or not they would have died of course is not known.

I certainly appreciate this opportunity as a layman to say a few words at this convention.

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Report Malpractice Threats Immediately to Doctor F. B. Tibbals, 1212 Kresge Building, Detroit, Michigan.

Editorials

HOLIDAY GREETINGS

On opening this issue of The Journal, the holiday season will still be some three weeks away. In extending our annual greetings at this time we are hopeful that we may pave the way for an unusually happy festive week and for which we are extending to our members, readers and advertisers hearty good wishes and greetings.

Every moment some form grows perfect in hand or face; some tone on the hills or the sea is choicer than the rest; some mood of passion, insight or intellectual excitement is irresistibly real and attractive to us—for that moment only. Not the fruit of experience, but experience itself, is the end. How shall we pass most swiftly from point to point, and be present always at the focus where the greatest number of vital forces unite in their purest energy? While changing processes melt under our feet, we may well grasp at any exquisite passion, or any contribution to knowledge that seems by a lifted horizon to set the spirit free for a moment, or any stirring of the senses, strange colors, and curious odors, or the work of an artist's hands, or the face of one's friends. Not to discriminate every moment some pleasing attitude in those about us, and in every brilliancy of their gifts some tragic dividing of forces on their ways, is, on this short day of frost and sun, to sleep before evening.

So for this holiday season we proffer the wish that each will cast about him and, viewing man, man's work, nature in her varying forms, labor, duty—in fact, all that goes to make the individual, life and environment of human beings, that in these he may find the good, the true, the inspirations, the ideals that will create a new feeling within him, the sustaining joy and hope of a brotherhood with mankind. Then, permeated with that spirit, enter in upon the festive holiday season with a contentment and joy that will make for a Merry, Merry Christmas. That is our wish to all.

REGIONAL CLINICS

Your Council and officers are demonstrating their mindfulness of your interests and wishes. Plans are rapidly developing for a series of District Clinics throughout the state. To put on these Clinics requires a vast amount of detailed work. It is hoped that two can be conducted during December. The one conducted at Traverse City in November is reported in this issue.

With the New Year it is anticipated that our plans and teamwork will be so perfected that one can be conducted every week during January and February.

Permit us to reiterate that these Clinics are calculated to be instructive. To accomplish the greatest good the help of the members in each district is desired. We must have your support, attendance and participation. Our Executive Secretary, Mr. Smith, will conduct the preliminary arrangements by correspondence. He will appear on the scene two or three days in advance to complete the final details. Lend him your every support.

The men on the program are not out on an advertising trip. They are contributing their time and labor in your behalf. They are losing business at home to aid you. Your excuse of business or loss of business for non-attendance is not valid. You will do more business and better business if you take the day or two days to be present.

Inasmuch as it is also purposed to hold a public meeting and to impart to the people of your vicinity, facts and truths regarding scientific medicine, you are urged to invite your patients and friends to attend that public meeting. We want your patrons to know that you are remaining abreast of the times and we also want them to know

what modern medical practices accomplish.

We repeat: Attend these Clinics, participate in them. Your neighbor is going to, and you cannot afford to let your people know that he is forging ahead of you and becoming a better doctor. Finally, you are put to no expense, for this is one of the benefits you derive from being a member of your County Medical Society.

A WARNING

Evidently through typographical oversight a dangerous error is found in the 1924 edition of Sajou's Analytic Cyclopedia of Practical Medicine, Volume 4, page 281. In discussing the administration of toxin-antitoxin we find the following:

"All infants below 12, and if possible below 18 months of age, should, the writer thinks, be actively immunized with 3 doses, each 10 c.c. of toxin-antitoxin. These injections should be given irrespective of the Schick test the infants may show at the time of immunization. The injections are given subcutaneously in the arm or below the angle of the scapula, and repeated every seven days. The toxin-antitoxin is well tolerated by young infants, and for that reason the dose advised is the same as that given to older children. The relatively larger dose of toxin-antitoxin will, of course, also give rise to a better immunizing response. All children over 18 months of age, as well as all youths and adults, should be tested with the Schick reaction first, and only those giving a positive reaction, immunized with toxin-antitoxin. Three injections, each 10 c.c., are given subcutaneously, one week apart."

The 10 c.c. should be 1 c.c. . A dosage of 10 c.c. would be fatal for the infant or child. We therefore issue this warning, and trust that no member will be mislead by this unfortunate typographical error.

THE COUNCIL

For the purpose of record as well as to acquaint our members with their Councilors, we are publishing in this issue the pictures of the personnel of this executive body. For the further imparting of information we repeat the Constitutional and By-laws provision setting forth the authority and duty of the Council and Councilors.

CHAPTER VII.—THE COUNCIL

Sec. 1. The Council is the executive body of the Society. It shall determine its own time and place of meeting. It shall elect its own Chairman and Vice-Chairman to serve one year. Its annual meeting shall be held co-incident with the annual meeting of the Society.

Sec. 2. Collectively, the Council shall be the Board of Censors of the Society. It shall consider all questions involving the right and standing of members, whether in relation to other members, to the component societies, or to this Society. All questions of an ethical nature brought before the House of Delegates or the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or of a county society, upon which an appeal is taken from the decision of an individual Councilor.

Sec. 3. It shall make careful inquiry into the condition of the profession of each county in the state, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist and for organizing the profession in Counties where Societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse between physicians of the same locality and shall continue these efforts until every reputable physician of the state has been brought under the Society's influence.

Sec. 4. It shall, upon application, provide and issue charters to county societies organized in conformity with the spirit of this Constitution and By-Laws, and revoke such charters when deemed necessary.

Sec. 5. In sparsely settled sections it shall have the authority to organize the physicians of two or more counties into societies, to be designated by suitable names so as to distinguish them from district and other classes of Societies. These Societies when organized and chartered, shall be entitled to all the privileges and representation provided herein for county societies, until such counties may be organized separately.

Sec. 6. The Council shall direct and control the publication of the Journal.

Sec. 7. The Council shall approve the expenditure of the funds of the Society.

Sec. 8. The Council shall appoint the members of the Medico-Legal Committee and supervise the duties and work of that Committee.

Sec. 9. At such annual meeting the Councilors shall report to the House of Delegates on the Society work that has been carried on in their respective districts during the preceding year.

The Society has intrusted to these men definite responsibilities. Each Councilor has expressed a readiness to acquit himself of the duties imposed. It remains for the memberhsip to render such support as will enable the Council to accomplish the purposes and activities of our organization. To that end we urge that officers and members of County Societies freely and frequently consult with the Councilor of their district. Discuss your plans, formulate your activities and outline a definite program of work. By so doing you will cause an increased dividend of benefits that you will derive from your membership. We are setting out on a serious and important program of state work. Its success will be determined by the degree of interest and expressed effort that you register.

SHALL WE?

The legislature of our state will convene in Lansing during the first week in January and will remain in session, for the politician's opportunity to grand stand, until April, May or June—it all depends how well time can be killed.

Among the many bills that will be tossed in

the hopper, we can expect that there will be several relating to public health, medical laws and the recognition of irregular, would-be practitioners of medicine. These latter groups will be seeking legislation to acquire the right to practice as they please. The question that confronts us is: Shall we make any effort to defeat unjust medical legislation?

We pass over the first principle that it is unjust to require one person to spend eight to ten years in study before he can practice and permit another person who takes a three-months or possibly a twenty-four months course, without pre-school requirements, to go out and practice along the same lines.

We pass by, also, the argument that these "Short-Cutters" are dangerous to the health and welfare of the people and that the public should be guarded against them.

We pass by the other arguments that have been advanced from time to time and present for your reflection the following: Shall we,

1. Refrain from all legislative activity in regard to cult practice acts?
2. Permit the legislature to handle the questions of granting cult recognition and let the ensuing baneful results be their responsibility to the public.
3. Remain content to let the facts of modern medicine justify itself and by educating the public as to these facts reveal the fallacies of these cultists.

These are the thoughts that are proffered for our members' discussion. We urge that you convey your opinions to your councilor or editor in order that a policy may be determined.

THE GORGAS MEMORIAL

During the past year, throughout the United States, the work of organizing the Gorgas Memorial State Governing Committees has been progressing. In some states the response has been most enthusiastic, while in others considerable effort has been necessary to bring home to the doctors, the importance of this movement to them, individually and collectively. Inasmuch as the Gorgas Memorial is primarily a medical movement and as such must have the united support of the profession if it is to make the proper impression on the general public, we take this occasion to outline briefly the Gorgas plan and to request the co-operation of our colleagues in bringing to a successful issue, this national health program.

We are planning to establish a Memorial for Crawford Gorgas, not of marble or bronze, but a permanent living organization in the form of a great health foundation typical of his work in research and curative medicine, that will unite lay men and doctors in an intelligent effort to obtain personal health—a health guild that will be supported and directed by the representatives of curative medicine.

The Gorgas Memorial consists of two phases:

1. An Institute in Panama for research in tropical diseases.
2. A health educational program in the United States and other countries that wish to co-operate and participate in the movement.

We are living in an age when people are knocking at all doors of knowledge and demanding that they be admitted. In the field of medicine who are so well fitted to meet this demand as those actually engaged in the practice of medicine? The doctors have a far more interesting and important message to deliver than any other group.

In the United States to-day there is scarcely a community that has not its quota of irregular "medical practitioners," so called. In many states there are strong organizations of the representatives of the various cults, whose theories are imposed upon an uninformed public. Public ignorance is encouraged by professional reticence and the result is the astounding growth of unscientific methods. If the profession is to maintain the high standard to which centuries of labor in behalf of suffering mankind entitles it, it is essential that a definite organized effort be made to familiarize the public with such facts as will impress upon it the importance of medicine's contributions to human welfare. A constant fund of proper health information through the newspapers, magazines, lectures, moving pictures and the radio, furnished by medical men and women of known reputation and standing, will direct the public to the proper source for medical advice and gradually eliminate the irregular practices constantly increasing.

One of the objects of the Gorgas Memorial is to furnish a channel through which this kind of information may be disseminated. It cannot be done by individual physicians. It must be conducted by a dignified, ethical organization, controlled by the medical profession. The name of Gorgas is synonymous with "better health." No more appropriate name could be adopted for a movement that has for its object, *the development of co-operation between the public and scientific medicine for the purpose of improving health conditions by implanting the idea in the mind of every individual that scientific medicine is the real authority in all health matters and as such should be recognized as the source of health instruction.*

Before we ask the public for financial and moral support, it is essential that the doctors

of the country unite in support of this program. As a means to this end, Governing Committees are now in process of organization, on the basis of 100 members to every 1,000,000 population in each state. Seventy-five per cent of the personnel of each Committee will consist of medical men and 25 per cent of influential laymen and women. The permanent activities of the organization will be supervised by these Committees in their respective states, in co-operation with the National Executive Committees.

An organization cannot operate without funds. We are endeavoring to raise an Endowment of $5,000,000, the interest only of which will be utilized to carry on the work, The principal will be invested in trust securities and remain intact. None of the money thus obtained will be spent for buildings or equipment. The Republic of Panama has donated the site and guaranteed the initial buildings and equipment for the tropical research laboratories, in recognition of Gorgas' great work in Panama, Those invited to serve as Founder members of the State Governing Committees are requested, as they accept membership on the Committees are requested, as they accept membership on the Committee to subscribe $100 to the Endowment Fund, payable within two years. Every individual on the State Committee is a contributing member. When the medical nucleus of the organization is complete, a general appeal for funds will be made to the public.

The American Medical Association at its recent meeting in Chicago, passed the following resolution:

"RESOLVED, That the House of Delegates of the American Medical Association, convinced of the great promise which the Gorgas Memorial contains of benefit to humanity through improved knowledge of preventive medicine and tropical disease, and of its peculiar adequacy, as a tribute to our great leader and sanitarian, recommend to the organized profession of the country, through its constituent state and county societies, the enthusiastic support of the project."

J. A. Witherspoon, Tennessee
Joseph Rilus Eastman, Indiana
Thomas Cullen, Maryland
W. H. Mayer, Pennsylvania
F. B. Lund, Massachusetts.

The Memorial has also been endorsed by numerous other medical and civic organizations.

Every doctor is requested to take a personal interest in the Gorgas program and to see that his community is adequately represented on the State Governing Committee. Each County Society should appoint officially at least one of its members to serve on the State Committee. This is one foundation that is controlled by the practitioners of curative medicine and as such should be supported by every practicing physician. Let us pull together, "the doctor for the doctor." Farnklin H. Martin.

MEDICAL RESPONSIBILITIES

O. L. RICKER, M. D.,
Councilor 9th District
CADILLAC, MICH.

Mr. Chairman:

As Councilor of the 9th District, I am very glad to be with you at this time. The value of such meetings can not be estimated in dollars and cents, neither can it be estimated in value to the State Society. The coming together of physicians, and holding of such meetings as we are to have today is going to be the means of saving the medical profession for the public. Traverse City is a very desirable place for holding these meetings being almost in the center of the district.

The opportunities of medical organiations are abundant and important consequences of responsibility. The opportunities of the medical organizations are also numerous and important, for opportunity not only implies but also imposes obligations. This is especially true when applied to physicians in respect to our relations to each other, and to the public which we serve because they, more than any other group, can contribute the efficiency and happiness of men, or to the inefficiency and unhappiness. The greatest contribution can be made to human welfare only. This is the main purpose of the physician or of the profession as a whole, and it is not possible to define just what proper professional relations are except through the existence of combined and co-operative judgment and wisdom.

The outstanding opportunity and the outstanding responsibility of medical organizations is for the improvement of scientific knowledge for its members, and for their knowledge in application of that rule. There is, as I see it, but one real great outstanding opportunity before the medical organization today, and that is the adequate scientific service to all classes of people, of every belief and creed who may be in need of aid of a physician.

As a member of the Committee on County Societies of the State Council, I am very much interested in the work of the County Society. There is something radically wrong with the medical men of Michigan, and their relations to their County Society. Few medical men

*Delivered at District Post-Graduate Conference, Traverse City, Nov. 18, 1924.

give one-sixth of the time to the County Society that they give to other community obligations, and yet at the same time the community is expecting the medical profession to keep abreast with the advancing times. We sometimes forget that a great bulk of the medical profession are to be found in the hills and valleys of our state, whose only medical center is the County Society. Most of our Medical Societies have not more than 25 members, a great many of them having a less number even than that. We forget that sometimes the County Society with 15 or 20 members can not hope to keep up with scientific programs, and keep the interest in their members, for after a time they get tired of each other.

The Medical Society is an absolute necessity in our scheme of organization, which to my mind is theoretically perfect, and which when it is properly operated is practically almost perfect. The organization which I speak of is our state and national medical organization. We have to maintain medical societies because jurisdiction of the County Society is the jurisdiction which can not be wisely or safely turned over to that organization. But I have come to believe, after studying the County Society thoroughly and noting the success and lack of success, in the societies that the district conference is going to be the means of saving the County Society. Following district conferences, local societies should take up the organizatio nand preparation of programs which will carry these societies through the year. These conferences offer a splendid opportunity for improvement of the medical profession from the stand point of their knowledge of the art of medicine. They will also invoke a powerful stimulation on the County Medical Society at once. There is no reason why Manistee, Ludington, Petoskey, Cadillac, and other cities of equal size cannot furnish men who will aid in the carrying on of the work of the individual medical societies. These men may aid their local societies by furnishing them with short papers bringing out discussions. These men may be interchanged from the various local societies and thus receive the experience from the discussions of various doctors of various communities. Not only will this stimulate more scientific programs for district societies but we can not help feeling that by the intermingling of medical men, the social life will be brought out. Doctors will get to know each other better, and know what they can expect from each other. If I am refering a patient to the Manistee Hospital, for treatment for rheumatism, diabetes or any other condition, it is and absolute necessity that I know who the man is at that hospital who is doing the best work for that class of patients. And the only way I can find it out is by associating with the medical men, listening to the discussions which each man brings out on that particular subject and thus choosing one of those men who has the best there is to offer for my patient. And the same applies to Traverse, Cadillac and other cities. There is not a man in this audience who has not patients in every town in Northern Michigan, or at least has people who are asking him at different times during the year "in case I am sick, who can I go to?" And you can not tell him unless you know the medical men from the various cities.

Much has been said of organizing the public in forming a society for educating the public. I think this is being over done. There is probably a still greater need in educating our own members to render the service of the type which the public is demanding and the better relationship to which we should bear to each other, and the purpose and the individual effort that we must manifest in carrying out the work that we as doctors hold ourselves out for in the eyes of the public.

At this point it is necessary to say that the work of the doctors is difficult. I think it is an unfortunate condition to live in a community and meet somebody on the street almost every day, and we cannot talk to them. These troubles exist in almost every center in Michigan. The same people might talk to you when you are out of town but not in their own community. The only way to get away from this is by educating the doctor in the Medical Society or the district conference or through the national organization. Some education has got to be brought to bear upon the physicians in order that they may be of better service to themselves and the general public. I think the most of these troubles should be ironed out in the community in which the medical men are practicing together. Medical men are of a higher type than the men that should be fighting with each other and they sould be done away with.

We as medical men are having lots of trouble at the present time with cults without having too much friction amongst those who are supposed to be qualified physicians practicing in their local communities. I think that we can take no better recogniiton than the article which appeared in our own State Journal a few months back and which the information of the individual physician was involved. If the medical profession is to get anywhere it must be thoroughly organized until the majority of the physicians realize the necessity of a united profession. The state societies are firmly of the belief if the physicians would join together in the Medical Society as a united profession they

could demand and get the help which each needs. The entire organized profession could go far towards illiminating the cults in business and give to the public the first there is in scientific medicine.

It is the duty of all phyiscians to join the County Medical Society and it is the duty of all County Medical Societies to hold meetings. It is the duty of the physicians and the County Society to become familiar with its state board of health and all public activities which are being carried on in this county. The physicians should know something of the programs of each of these organizations. If the State Board of Health is working in your community it is absolutely necessary for the best interest of the medical profession and the best interest of the people whom you are serving, and whom are you supposed to represent that you know what this organization is doing. The same applies to the Red Cross and any other public health society. It is nobody's fault but the individual doctor and his Medical Society if things are carried on in his community which are not satisfactory to the organization. There is a lack of physicians in the rural communities, it is also true that there is a living for any physician in any city from 2,000 up in the State of Michigan if the physician will work. I feel that if a physician takes it upon himself to go in a community and inform the public that he is there for carrying on the work of his profession, then the public has a right to demand that he give a legitimate number of hours each day to serving the public. I do not feel that any physician whoever he may be has any right to hold claim upon a community in which he is not willing to do his part. I believe I am safe in saying this relative to the Council of the Michigan State Medical Society it is absolutely no reason why the nursing profession should go out into the rural districts and be dictators of public health activities. And there is the very reason that the physician is losing out in the great many cases in his responsibility to his patients through the combined efforts of those who wish to dictate the programs which may apply in cities but are not workable in rural communities.

Gentlemen, do not let me lead you to believe I am in discord with the activities of the State Board of Health or any public health activities. I am not. But I am for centralization and standardization of public health activities with the medical profession back of all such activities.

We need medical inspection of school; preventive medicine.

We need periodic examinations of adults as authorized by the A. M. A.

We need clinics for the examination of the tubercular and his contacts.

We need the survey of crippled children and many other activities. But all these should be under the direct supervision and co-operation of the medical men.

I feel that no organization has any right to come into a local community and bring with it discord to the medical profession. No organization has any right to prescribe or recommend for the care of any physician any case until they are familiar with what is being done for that patient by the local physician who is responsible for the care of such patients.

Is it any wonder you have the cults when the medical man is humiliated before the layety by some active public health worker who is not in harmony with all the medical profession and can do more harm than good?

So as I have said before—we as a medical profession should get together and see that the profession is recognized as it should be. We are the dictators of public health, why should we not dictate.

Let us put more activities into our local societies and thus give more support at state and national organizations, who in turn can give us aid in our many problems.

Thus a better doctor and a better medical profession.

NEW A. M. A. EXECUTIVES

The Board of Trustees of the American Medical Association convened in regular session in Chicago on Nov. 20-21st. The Board elecetted as General Manager of the Association, Dr. Olin West; as Editor of the Journal of the American Medical Association, Dr. Morris Fishbein; as Business Manager, Mr. Will. C. Braun.

Dr. Olin West, the new General Manager, is a Tennessee native, having been Secretary of the Tennessee State Medical Society, and health officer of that state. Four years ago he was selected as Field Secretary of the A. M. A. and became Secretary of the A. M. A. upon the death of Dr. Craig. He has so served for three years and since October has been acting Geenral Manager of the A. M. A. We feel certain that in electing Dr. West to this office the Board has voiced the wishes of the profession. Dr. West is not a stranger to Michigan doctors. He is a man of integrity and senses deeply his responsibilities. He is sincerely concerned with our organizational problems and purposes to solve these problems for the best interests of all. Seek as they have, the Board, in our opinion, selected a man who typifies the

ideals of medicine, the like of whom is not to be found elsewhere.

In the selection of Dr. Fishbein as Editor of the Journal of the A. M. A. there has been secured the most brilliant, capable and efficient medical editor in the world. Dr. Fishbein has been the Associate Editor for fourteen years. By education, training, experience and inherent ability he abundantly meets every requirement for editorship. We know of no one who will be able to maintain the high standard of our National publication as will Dr. Fishbein.

For thirty-one years, Mr. Will C. Braun has been Advertising Manager of the Journal of the A. M. A. By his ability and business sagacity, he has brought about the financial success of that publication. He has annually been in charge of the exhibits and business arrangements of the Annual Meeting. He has supervised the actual business affairs surrounding headquarters. Efficient, foreseeing, sound in business judgment success has attended his activities and services.

On behalf of our state we tender to these new executives our congratulations. We likewise pledge loyalty and support. We further voice our pleasure in their election. Under their guidance we feel assured that our great national organization will continue in its onward progress of achievements.

THE DISTRICT POST-GRADUATE MEDICAL CONFERENCE

According to the plans of the Michigan State Medical Society the first District Post-Graduate Medical Conference was held at Traverse City on November 18, 1924. This day was one of history in that it initiated the carrying out of a new program by the State Medical Society in co-operation with the Councilor Districts and their respective County Medical Societies. The aim of these Conferences is to bring to the doctors who are intensely busy in their field of practice the best and most modern developments in scientific medicine and to give to the public the facts and truths in this scientific field. For the future or the year ahead the Executive Committee has plans for conducting at least twenty District Post Graduate Medical Conferences in both the Northern and Southern Peninsulas of the State.

The program that was entered into with interest at Traverse City and attended by an average of forty-five doctors from sixteen different cities of North Wetsern Michigan, is the following:

MORNING PROGRAM

10:30—Openins Statements—Councilors Ninth and Thirteenth District, Executive Secretary.

10:40—Examination of Patients (Illustrated), B. R. Corbus, Grand Rapids, Chief of Medical Service, Butterworth Hospital, Grand Rapids.

11:00—"Diagnosis of Chest Diseases," J. S. Pritchard, M.D., Battle Creek, Chief of Department Diseases of the Chest, Battle Creek Sanitarium.

11:30—"Renal Sugery," Hugh Cabot, M. D., Dean and Professor of Surgery, Medical Department, University of Michigan.

12:15—Luncheon, Park Place Hotel. Three ten-minute Organization Discussions.

AFTERNOON

1:30—"Therapeutics of Heart Diseases," M. A. Mortenson, M. D., Battle Creek, Chief of Department of Circulatory Diseases, Battle Creek Sanitarium.

2:10—"Treatment of Acute and Chronic Bronchitis—Pneumonia," J. S. Pritchard, M. D.

2:45—"Gallbladder and Ulcer Surgery," Hugh Cabot, M. D.

3:40—Blood Pressure Findings," M. A. Mortenson, M. D.

4:15—"Modern Methods in the Management of Obstetric Cases," H. S. Colisi, M. D., Chief of Obstetrical Department, Butterworth Hospital, Grand Rapids.

5:00—"The Examination of the Infant and Child,"H. G. Clay, M. D., Grand Rapids, Attending Pediatrist, Butterworth Hospital, Grand Rapids.

6:00—Dinner, Park Place Hotel. "The Doctor's Relation to the Public," Hugh Cabot, M. D.

EVENING PUBLIC MEETING

8:00—"The Preservation of Your Personal Health," Hugh Cabot, M. D.

The success of these Post Graduate Medical Conferences depends upon three things; friendship, co-operation and work. Friendship must exist among the doctors of every medical society and likewise among the doctors of all other medical societies. There must be a close co-oepration for achievement first among the doctors of each County Society, secondly of each Councilor District and thirdly of the State Medical Society. There must be also, a close co-operation in an organized way of the County Societies, with the respective Councilor Districts and each in turn with the State Society. The reverse of this is also true in that the State Society must co-operate with each and every section of its organization. And this is not enough. This is selfish in outlook. The great public is still untouched. There must be friendship and co-operation with the people through recognized civic bodies of standing in every community, every county and in the State. The Joint Committee of Public Health Education is ever ready to help. But friendship and co-operation are not enough. To accomplish the aims and objects of this program of the State Medical Society requires not only friendship and co-operation alone, but in addition, work. Every doctor should serve his fellow man by working in an orgonized way through his

medical societies for the advancement of scientific medicine and a broad understanding of its value on the part of the public. Work for the success of the Medical Conferences is one definite way of attaining this achiement.

The following comments evidence the value that has been credited to the conference. In this undertaking our organization records the commencement of a new era of activity:

The Editor of the Journal of the Michigan State Medical Society:

In reply to your letter of November 19th, would say that the conference at Traverse City on the 18th was a decided success, accepting the expression of many physicians who were in attendance. And I feel confident that I received the expression of the representatives from various counties.

I must say that I was more than pleased with the high tsanding of the physicians who were present. I do not feel at all boastful when I say that the 9th and 13th Districts have some very fine physicians, highly educated and a very congenial bunch of men. And their interest in this conference was very greatly appreciated.

The meeting was called to order at 10:40, being only about 10 minutes late as per schedule. Everything went off very smoothly, physicians all remaining to hear the very interesting presentations which were given. I feel that your Committee is to be congratulated upon selecting the physicians who so very kindly contributed to the program, and owing to the intense interest which was manifested which is only measured by the fact that every man remained in his seat during all the sessions, and listened with all the interest which was creditable to the speakers.

The place of meeting at the Park House Hotel was ideal. As I looked over the audience at various times during the day it impressed me that these conferences are of far greater importance than the Sectional Meetings, which are held in connection with the Michigan State Medical Society. While I do not wish to lead you to believe that I am not in accord with the Sectional Meetings, which we know are the real meat of the medical meeting. Nevertheless these conferences are going to bring the workings of the Michigan State Medical Society before physicians who have not been fortunate enough to attend State Meetings. I cannot speak to highly of these conferences and feel that they are going to be the making of a better physician, better County Societies and better State Societies.

I wish you would express my appreciation to Mr. Smith, the Executive Secretary, and advise him if I can be of any help to him, at any time, I would appreciate his calling upon me.

Let us all push forward for a banner year in 1925 of the Michigan State Medical Society. I remain

Yours Respectfully,

Otto L. Ricker, M. D.
Councilor.

The Editor of the Journal of the Michigan State Medical Society:

Regarding local feeling concerning the conference meeting held in Traverse City, November 18th, will say that it made a very favorable impression on the physicians of the district and, I believe, has helped us some with the laity.

The program was excellent and the men who attended were well repaid for the time and effort spent in coming, although some of them drove a hundred miles or more to get here.

The general concensus of opinion is that it was the best meeting ever held at this point.

Your speakers were all good and I think the use of lantern slides with the lectures were a great help and enabled us to get a great deal more out of the meeting.

We believe that the program was somewhat heavy for the few hours we had, but even at that, almost everyone stayed until the last bell sounded and then attended the public meeting.

The public meeting was attended by something over five hundred of the best citizens we have here who were pleased with Dr. Cabot's talk.

We are hoping for another meeting some time next spring. Mr. Smith, the new Executive Secretary, was well liked.

Pardon this short letter as I wanted to get it in to the mail tonight as per your request.

Sincerely,
F. F. Swartz.

The Editor of the Journal of the Michigan State Medical Society:

The meeting at Traverse City was a success in every way. Forty-five physicians attended and were at every lecture. I never before saw a group of medical men who seemed so interested in a program.

Dr. Corbus of Grand Rapids, Dr. O. L. Ricker of Cadillac, and our new State Executive Secretary deserve great credit for the management of the meeting.

The lectures started on time and went along with a bang, not a dull minute in the whole program. The men on the program were exceptional. Their lectures were interesting as well as instructive.

Several men present expressed themselves as more than satisfied with the conference, and men from my district want another such meeting at Petoskey in the spring.

Meetings tlike this one keep the Societies alive and each man that attended this meeting, I am sure, went home full of pep and satisfied that the State Society is trying to do something for him.

Yours truly,
B. H. Van Leuven, M. D.,
Councilor 13th District.

Editorial Comments

The Rotary Clubs of the World, through its international organization committees, is promoting the adoption of codes of ethics for various trade, manufacturers and business organizations and groups. It has recognized the necessity of such codes to govern trade practices and competition. Rotary is preaching with effectiveness, standards of correct practice. It announces that the trying situations of our very complex business life, with its constantly changing and increasing number of new business relations and problems, point to the need of written rules of conduct for the guidance of the many and the good of all. Rotary proposes also to encourage and foster an observance of these code rules and to induce the individual to apply them into correct business action. To all of which we say Amen. Likewise, we remind our members of our own Principles of Medical Ethics. We have the code, many are familiar with its principles, but how many interpret them into correct professional practices? Let us join Rotary in that part of its movement to bring about observance of high ethical standards by exemplifying our Principles of Medical Ethics in our daily work and associations. Show up at the same time the grafter and commercialist.

Of the making of many Christmas cards there is no end. With many the custom of sending out these cards is purely a custom. With a considerable number it is an advertising stunt and habit. With some recipients the thought is not of the wish or greeting conveyed, but more of how many cards received. This has been made too common a custom and tainted far too much with commercialism in buying the cards and sending them. The real inspiring spirit is absent. A penny, "two for a nickle" postcard, or a twenty-five cent engraved card with a one or two-cent stamp attached is not sufficient to convey a sincere Christmas spirit greeting or New Year wish. You have friends in numbers and some in hosts. Each possesses personal, individual characteristics. Each is your friend for a varying reason. Some are more intimate and dearer to you. You cannot send a sincere greeting or a hearty wish and make it mean anything at all by mailing to the whole number a stereotyped Christmas and New Year card. The suggestion is advanced that you set about to find a personal way to extend your Christmas messages to your friends and do away with commercialized Christmas and New Year's cards.

There is no question that too many appendices are being removed, too many round ligaments shortened, too many tonsilectomies performed, too many septums straightened and too many gallbladders removed because the diagnosis has been based upon the securance of a fee and not upon clinical and pathological findings. This practice is prevalent. It is being recognized by the patient and the public. It is exercising a harmful influence. One competent surgeon recently advised us that not a day passes in which he does not inform one or two patients not to have an operation, when they had been advised by others that an operation was imperative. What is needed are more surgeons who will rise up in a like manner and aid in wiping out these unnecessary operations and financial robberies. There is no man more deserving of contempt and denouncement than the "financial operator" who poses as a surgeon. It is time to clean house and kick off our hospital staffs this type of a man. If we don't do it, ere long hospital trustees will. Which bouncer do you prefer?

When prominent individuals become seriously ill the public in general is intensely interested. The people want to know the nature of the illness and the daily condition. To that end the attending medical men issue a bulletin. The meagerness of these bulletins and the often uninterpretable nature of their contents is the subject of this discussion. Every physician has had the experience of being approached by local people who question him as to the meaning of these bulletins. These are interested parties who are interested and who approach their local doctors for detailed information. The local physician, because of the meagerness of the bulletin, is unable to add additional interpretation and is often placed in an embarrassing position. That was the experience in the recent illness of both President Wilson and President Harding, Mrs. Harding, Senator Cabot Lodge, Secretary of Agriculture, and right close at home, in the illness of President Burton. The suggestion, not criticism, is made that attending physicians of prominent persons, when that individual is acutely ill and bulletins are issued, should set forth in a concise manner the clinical findings so that they may be intelligently interpreted to interested individuals by any doctor.

Just now there seems to be a wave of activity to provide medical and hospital care for the crippled child. These unfortunate children have become the concern of Rotary, Shriners, Knights Templar, Elks, Kiwanis, American Legion, Department of Health, and special clinics. State and nation-wide movements are being conducted. Hospitals are being built. Special membership assessments to provide funds are being levied. Is this a spasm? Are efforts being duplicated? Is systematized effort being exhibited? Is the sympathy string being overplayed? These are questions calling for serious reflection by those who act as leaders in these varied sponsorships.

Our thanks are extended to those members who cut out the ad, "Doctor, Give Us a Minute, Please!" and sent it in. We are disappointed because we didn't receive at least 1,000 replies. So we are repeating our request this month. Come on, you Councilors, Section Officers, Officers of County Societies, Committeemen and Members! Turn to our ad section. Clip the ad. Fill in the blank space. Send it in! Mobilize during this month of December and aid us in this business proposition.

Well, now that election is past, the income state tax amendment defeated and cold weather at hand we have nothing to worry about for there are still 24 shopping days before Christmas, the legislature doesn't convene until January and winter taxes are not due until January 31st. December bids being a carefree month with spare time available to do some work for your local Medical Society and become interested in its activities. Our Executive Secretary is going to take up these problems in each county. We bespeak your interest and support. Write and tell him how you can and will be of assistance.

County Secretaries are reminded that in collecting 1925 dues the new amount of state dues is ten dollars. Remittances should be made on the monthly report blanks. If your supply is exhausted, drop us a line and we will send you a new supply. Make checks payable to The Michigan State Medical Society, and not to the treasurer. Report and remittance to be mailed to the Secretary.

There is a splendid article in this issue by J. Rilus Eastman of Indianapolis. It's one we may all well ponder upon for it furnishes much for meditation and application. Dr. Eastman has presented the subject in a scholarly form. If you are in disagreement with him, or if you are disposed to enlarge upon his views, we welcome your discussion for publication in our correspondence column. May we have them?

Our Executive Secretary makes his opening bow in a new department that will be a feature of each issue of The Journal. We bespeak a cordial reception on the part of our members for Mr. Smith. He is starting out upon important activities that are conducted for your benefit and your personal gain. The degree in which you respond will determine the size of the profit that accrues to you.

This issue does not contain all that we purpose in including for the increase in value of The Journal. A new volume commences with the January number. At that time we hope to complete our plans for a better and bigger Journal.

You will pay $10.00 for a spotlight for your flivver and think nothing of it. While your spotlight is of use, your Society membership is of hundred fold more value and service to you and costs you only $10.00. Of the two, which can you afford to miss? So send in your 1925 dues to your County Secretary and watch the benefits you will obtain.

Kentucky is proposing the increasing of its State Medical Society dues to $10 per year. In commenting thereon it is stated that the annual dues of the Kentucky Osteopathic Association is $75 and the Chiros is $60. We wonder if these are spending the bulk of their income for personal education and betterment as do Medical Societies or is the greater amount expended in lobbying with legislators.

Has not the pendulum swung to its furthermost limit in the present attitude regarding tonsilectomy? Here and there will be noted the issuance of a warning against wholesale methods in advising removal of tonsils. Internists are expressing opinions that the tonsil is not at fault as frequently as has been stated. Diseased tonsils are not the primal factor of pathological conditions in the degree that has been credited to them. Their removal is not the panacea in every instance. In our entire hitsory no other part of human anatomy has had directed to it so concentrated condemnation as has the tonsil. It has been estimated that fifty percent of the present day tonsilectomies are unnecessary. This fifty per cent has been classified as the "gasolene supply" of some doctors. Well, will someone rise up and give us the real facts? What is going to be done to stop these unnecessary tonsilectomies?

Correspondence

The Editor of the Journal of the Michigan State Medical Society.

1 The Adjutant General of the Army is making every effort to get all men eligible for the bonus to make their applications, or to decline same, at the very earliest moment. The inclosed statements by the Adjutant General will give you some idea of the work and of the efforts being made to finish this necessary work as soon as possible.

2. It is thought that the members of your profession are probably in a better position than most any other agency to assist the Adjutant General. Would you please circularize your members and ask them to assist in having all delinquents make their applications? There must be many of these delinquents coming to hospitals or needing medical attention. They probably have failed to apply either through procrastination, or for the reason that they do not know where to go for assistance in preparing the application blanks, or who do not want the bonus.

3. There are many Regular Officers and enlisted men of the Army, Navy and Marine Corps on duty in many cities and towns in your State. These officers and men may be found at Army Posts, recruiting stations, the Red Cross, all American Legion posts, the Veterans' Bureau and Post Offices are ready and willing to assist.

4. Your assistance in this matter will be greatly appreciated.

For the Commanding General:

Charles C. Smith,
Colonel, A. G. D.,
Adjutant General.

State News Notes

COLLECTIONS

Physicians' Bills and Hospital Accounts collected anywhere in Michigan. H. C. VanAken, Lawyer, 309 Post Building, Battle Creek, Michigan. Reference any Bank in Battle Creek.

NURSES' private home, invites convalescents and invalids; best of care, fine location. R. Rs. N. Y. C. and Interurban; best of references given. For particulars write Bessie Bileth, 566 Ely Street, Allegan, Mich.

LARGE Eye, Ear, Nose and Throat Clinic wants a man who wishes to take up refractions. Opportunity to learn Ear, Nose and Throat work in addition, if qualified.. Address Michigan State Medical Journal, Powers Theater Bldg., Grand Rapids Mich.

WANTED—To adopt a girl of age one to four years, by practicing physician. Customary information as to birth and health required. Any physician knowing of a desirable child, please communicate with—Adoption, c/o Journal.

WANTED—Position with gynecologist and obstetrician, surgeon, group or busy general practitioner. Detroit preferred. Class A-1 graduate, age 32, married, Mason, Gentile. Has had general interneship, special training in obstetrics and gynecology and has done general practice. Willing to work hard, but must have living wage with opportunity for future. Best of references. Address M1024—c/o Journal.

FOR SALE or rent, the office and private hospital of the late Dr. F. J. Knight of Charlotte, Michigan. Hospital is so arranged, could be used as residence if hospital not desired. Splendid opportunity for a good doctor or surgeon to obtain a very lucrative practice. Address Mrs. F. J. Knight, Charlotte, Michigan.

UNUSUAL OPPORTUNITY afforded by sudden death of well known orthopedic man. Long lease on beautiful offices, well equipped for most up-to-date orthopedic work. Complete physiotherapy outfit. Chance to step into exceptionally well established practice. Inquire Miss Williams, Room 322 Professional Building, 10 Peterboro Street, Detroit, Mich.

WANTED: Salaried Appointments for Class A Physicians in all branches of the Medical Profession. Let us put you in touch with the best man for your opening. Our nation-wide connections enable us to give superior service. Aznoe's National Physicians' Exchange, 30 North Michigan, Chicago. Established 1896. Member The Chicago Association of Commerce.

A PRACTICAL course in Standardized Physiotherapy, under auspices of Biophysical Research Dept. of Victor X-Ray Corporation, is now available to physicians. Offers a highly practical knowledge of all the fundamental principles that go to make up the standards of modern scientific physiotherapeutic work. Course requires one week's time. For further information apply to J. F. Wainwright, Registrar, 236 So. Robey St., Chicago, Ill.

A paper on "Eye Changes in Diabetes" was presented by Doctor Walter R. Parker, Professor of Ophthalmology of the University Medical School before the Post-graduate Section of the American Academy of Ophthalmology and Otolaryngology at Montreal on September 20th.

Dr. George Slocum of the Department of Ophthalmology, University of Michigan Medical School, read a paper on "Irremovable Foreign Bodies from the Eye" before the State Medical Society on September 16th at its meeting in Mt. Clemens.

The Pathological Laboratory of the University of Michigan Medical School was visited during the month by Dr. A. Wadsworth of Albany, New York, head of the Health Department Laboratories of the State of New York, and by Dr. S. R. Haythorn, Professor of Pathology at the University of Pittsburgh.

Research work on the poisonous action of aluminum and lead is being conducted by the Pathology Department of the University Medical School.

Volumes 11 and 12 of the Contributions from the Pathological Laboratory of the University Medical School have just been issued and distributed. Volume 11 contains thirteen titles and Volume 12 seventeen titles of papers published during the last two years by members of the Pathological Staff.

Doctor A. S. Warthin of the Department of Pathology, University Medical School, represented the University of Michigan at the dedication of the new Pathological Institute of McGill University in Montreal. During the last week of November Doctor Warthin gave seven post-graduate lectures to a post-graduate group composed of seventy-four physicians in Spokane, Washington.

A paper was read before the Michigan State Medical Society at Mt. Clemens by Doctor E. P. Russell of the Department of Pediatrics and Contagious Diseases of the University Hospital on Infantile Tetany with Report of a case. Doctor J. P. Parsons gave a paper on "The Physiology of the Quartz Light" before the same Society.

Doctor Walter R. Parker of the Department of Ophthalmology of the University Medical School read a paper on "The Mechanism of Papilledema" before the American Academy of Ophthalmology and Otolaryngology in Montreal on the 18th of September.

Doctor Walter R. Parker of the Department of Ophthalmology, University Medical School, was elected President of the American Board of Ophthalmic Examinations.

Doctor William Stokes of the Ophthalmology Department, University Medical School, was married to Miss Margaret Scott at Lake City, Michigan, September 27th.

Items of personal news and interest are solicited. We welcome your interest in this department of the Journal.

Dr. Chas. B. Long, of Pontiac and Dr. G. W. Nihart of Petoskey, spent a month of hunting and fishing in the Upper Peninsula. (No, the editor did not receive any venison or fish).

Dr. B. H. VanLewan of Petoskey is spending a month in Upper Peninsula hunting.

Dr. J. W. Inches of Detroit is on a hunting expedition in South Africa.

Dr. J. F. Cardwell of Grand Rapids is spending the winter in Florida.

Are you reading our Journal advertising pages? Are you patronizing these advertisers? The Journal depends upon you to assist in maintaining this revenue.

Dr. James H. Boulter of Detroit has moved to Beverly Hills, California.

Dr. Frank S. Bachelder, Assistant Medical Superintendent, Pontiac State Hospital, has resigned after 18 years of service, and will enter general practice in Pontiac, Dec. 1, 1924, with office in the Marsh Block, 74½ N. Saginaw St., and residence at 57 Mary Day Avenue.

Doctor and Mrs. Thos. R. Whitmarsh, of Sault Ste. Marie, Mich., sailed last month for Europe where they will spend the winter in Vienna.

Vernell H. Reeder, son of Dr. and Mrs. James A. Reeder, of Clare, was married November 17th to Miss Marjorie Jackson, also of Clare.

Dr. John J. Corbett has opened offices at 1202-6 David Whitney Building, Detroit.

Dr. Fred H. Cole spent some time at Rochester at the Mayo Clinic. during the early part of last month.

Drs. C. D. Brooks, Wm. R. Clinton and L. B. Ashley have removed their offices from the David Whitney Building, to 113 Martin Plalce, Detroit.

At the November meeting of the Academy of Surgery of Detroit, held at Harper Hospital, Friday, November 14, Drs. Max Ballin, Wm. J. Cassidy and Thomas Cooley addressed the membership and exhibited some interesting cases. Among the out of town members present were Dr. C. D. Darling from Ann Arbor and H. E. Randall from Flint.

The Council of the Michigan State Medical Society will hold a special session in Detroit, December 11, 1924, at 9 a. m.

Dr. Robert Beattie is convalescing from a recent operation for appendicitis at Province Hospital, Detroit.

Dr. Angus McLean presented to the internes of Harper Hospital a set of Ochsner Surgical Diagnosis and Treatment and received from the internes the following signed letter:

Dear Doctor McLean:—

The undersigned internes of Harper Hospital wish to express to you their appreciation of your thoughtfulness in presenting to them a set of Ochsner Surgical Diagnosis and Treatment.

We assure you that they are in constant use and of great help in our medical education.

Very Sincerely Yours,

H. H. Heffron, M. D.	Harold B. Fenech, M. D.
Harry A. Pearse, M. D.	Robert A. Weber, M. D.
Arthur S. Hale, M. D.	Martin Feldstein, M. D.
James F. Busby, M. D.	J. Frank Hackett, M. D.
L. A. Chrouch, M. D.	R. W. Waggoner, M. D.
Harold U. Mair, M. D.	O. C. Armstrong, M. D.
E. V. Johnston, M. D.	D. P. Hornbogen, M. D.
E. H. Lauppe, M. D.	V. R. Marburger, M. D.
Arch Walls, M. D.	Benj. L. Sargent, M. D.
W. F. Schreiber, M. D.	Russel H. Strange, M. D.
C G. Clippert, M. D.	Donald A. Bailey, M .D.
Neil J. Whalen, M. D.	W. Warren, Jr., M. D.
F. J. Fitzjatrick, M. D.	R. H. Morrisey, M. D.
H. W. Harrison, M. D.	Chas. S. Appelbe, M. D.
Frank D. Linn, M. D.	L. F. Carter, M. D.
Chas C. Merkel, M. D.	John Tulloch, M. D.
H. C. Metzger, M. D.	E. A. Stewart, M. D
Clarence D. Moll, M. D.	Henry S. Powers, M. D.
Earl B. Ritchie, M D.	T. Leuculea, M. D.

Our Society Business and Activities

HARVEY GEORGE SMITH

EXECUTIVE SECRETARY

NOTE: This Department will each month contain a discussion and report of our Society work and planed activities. Your interest and correspondence as to your problems is solicited.

SALUTATION

In tendering this salutation to the doctors of the Michigan State Medical Society, may I say that I come into your fellowship and into your Society in a humble spirit. Your Executive Committee, in its last session unanimously elected me to fill the office of Executive Secretary. This is an important office and means at the same time an advanced step for the Michigan State Medical Society in the direction of scientific medicine, organization in the profession of and the development of more thorough understanding on the part of the lay public as to what scientific medicine is and what should be the understanding by the layman of that science which has in its united knowledge the actual responsibility of the health of the people of Michigan, the United States and the nations of the world.

The position of Executive Secretary of the Michigan State Medical Society carries with it many and heavy responsibilities. The duties that pertain to this office are numberless. Every County Secretary will no doubt and should be looking for some assistance from this office. It should be given. Every member of a County Medical Society and of the parent state organization has the right to look forward to receiving some help either directly or indirectly and this should be given. Personally, I want to say, as your Executive Secretary, that I am yours, not to bring increased dues to your membership but to bring service to each and every doctor, by working toward the end—the fulfillment of the ideals of the profession of medicine, through more careful and systematic organization.

At this time it is impossible to definitely state what I am to do. As the days pass and only as I come to learn of the problems of the profession through careful study and through a close fellowship and friendship with many doctors in the science of medicine can I be of more service. Let me state right here, however, that there is no *ego* to be seen in the activities of this office. The work that we do is not to be "I have done this or that thing" for the Michigan State Medical Society, but it is to be *"we."* As I go about my duties learning here from one doctor and there from another, here from one Society and there from another, and on and on, let us work together in closest co-operation and in perfect frankness in the interest of better organized medicine for the State of Michigan.

The officers of your State Society have already accomplished many things. Your Executive Committee is intensely interested and your Secretary-Editor has been and is most ambitious for your Society. He it is who has for ten years advocated an Executive Secretary for the Michigan State Medical Society. That aim has been attained. Let us show results: Doctors, County Societies, as a single unit not each for itself, but all together. Not the *ego,* but the *WE.*

I thank you personally for permitting me to enter into your fellowship and into your work.

Harvey George Smith.

THE WORK OF THE COUNTY MEDICAL SOCIETY

Just what is the work of the County Medical Society, is a question that all members have asked, but more especially the Society Secretary. What can be done that has not already been done? Are we to continue just as we have been doing? Where can we go to learn what this work is that we know is so important. Is there not one single place where the wise man sits who can tell us what is our work? It is an organization principal that when a society of any type whatsoever comes to the place where the members have no tasks for the day following, that such societies crumble. There are unnumbered monuments throughout the state today for this simple reason alone. Then is not the conclusion as to what is the work, found in the answer, look within and not out? Suppose, for example, that a County Society has a series of programs arranged to cover a year or more. The speakers are all men famous in the profession of medicine and bring to that society the very best that they can give and that can be secured on the various subjects. Will the society have found its work and will it have accomplished its task? Will it be a virile, growing society, fulfilling the aim of the

medical profession of that county? The quetsion can be best answered by saying that every society must without a question retain its own responsibility. The Society that assumes no responsibility or has not assumed its responsibility in the past is on the downgrade.

The editor of the New York State Journal of Medicine after an extensive study of his state summarizes his report by saying that the County Medical Societies have three great functions:

1. The education of individual doctors in scientific medicine.

2. The promotion of community movements in medicine.

3. Social activities among the physicians themselves.

To fulfill these three functions will require responsibility, work, thought, ambition, enthusiasm, faith, justice. We can accomplish these things by a closer working relationship between the County Societies and the State Society and among the Societies themselves. Let the State Society help, be a clearing house for methods, and ideas and let the results come from the field of action. Every County Society must have a vision, see it resume responsibility and then attain.

THE COUNTY SOCIETY REPORT

The County Medical Society Report is the record of the activities that each society conducts from week to week, from month to month and from year to year. All these reports in reality make up the record of the Michigan State Medical Society as each County Society by its own by-laws, is a member of its parent organization. If we take a step further, these records added to the records of all other such societies in the United States make up the accomplishments of the medical profession in the field of practice. With this point of view for the report are we not here in Michigan ready to take upon ourselves the responsibility for our various societies and for our State organization? We need and want this complete record beginning now. This means every County Society.

What does the report furnish? First: It gives the members of the local society a knowledge that their own society is at work, that it is keeping up the standing of the medical profession in their county and more than that, it is adding to, by progressive steps, that which each physician wants his society to take, and of which he wants to be a part. Secondly, Each Society as a unit has a duty to tell to every other County Society in the State of Michigan what it is doing, accomplishing and contributing to the practice of medicine. Each Society is doing its work in a different way and this is constructive building for the future, it is the activity that has new ideas. Every Society gets new ideas by knowing what its neighbors are doing, the methods used in bettering the Societie's welfare and its standing in the community of the county—the community of the scientific man and the community of the layman.

It is not sufficient to report only of the progress and leave out those things that are commonly tabooed as failures. Failures, even though they can never be defined as accomplishments, often are the actual and long looked for steps to progress. It is not necessary for all of us individually to pass through the same failures to make progress. When one Society discovers how, when and where it has failed, this information in itself when given to other organizations interested in the same aims, naturally steps up, through a knowledge of learning and not experience. That which has required one society years of strenuous activity to acquire, may be attained by another in a few minutes. The report of failure, then, is the basis for progress for every unit of the Michigan State Medical Society, just as is the record of those activities that are known as progress.

Again, what does the report mean? It means accurate history of the fifty-six County Medical Societies of the State of Michigan, and thus a complete history of the Michigan State Medical Society. We do not know that other States have achieved to this high accomplishment, we do not need to wait for them to do so. Let us begin now and record our history in the making and without a lapse.

Medical Societies are earnestly requested to take a few minutes after each meeting of their societies to write the record of activities, noting special points of interest to the medical profession of their county and any action taken by the Societies relative to the steps taken in developing interest in a proper understanding of the science of medicine on the part of the public. The promotion of community movements on the part of the medical profession is the next great step in the evolution of medical science. The State Society wishes every Secretary to keep in the files of the County Society a copy of such written historic information and send regularly the duplicate of such information to the office of the parent Society. Cooperation and not disintegration is a way to the scientific advancement of Scientific medicine.

Among Our Letters

NOTE.—*This department is the open forum of our members. Your communications and discussions are welcomed. Anonymous communications cannot be accepted, though at times names may be omitted by the Editor. Personalities will not be printed and responsibility for opinions is not assumed. We invite your interest in this department. Address: The Editor, Journal, Michigan State Medical Society, Powers Theatre Bldg., Grand Rapids, Mich.*

NEED OF PUBLIC HEALTH EDUCATION

Frequently we receive queer and curious letters. Here is one of recent date. We'll say our Joint Committee on Public Health Education has a job, for there are thousands in ignorance. Read for yourself.

Ionia, Nov. 3, 1924.

State Medical Society, Powers Theatre Building, Grand Rapids.

Dear Sir i saw your name mentioned in the Grand Rapids paper in regard to get healthier people now i have something that has proven out to have merit for diferant diseases & it has worked when the Dr. have quit & it brought them out & saved their lives & i think the Dr. should use this for it has value in it to save life & it is A simple thing & never seems to hurt no one if it dont help them now i except to be in the Rapids on the 10 of this month & if you will write me & tell me where i can meat you on that day or on the 11 i will come & see you.

Resp.

E. O. B.——,
R. 5, Ionia, Mich.

Traverse City, Nov. 6, 1924.

Editor The Journal:

Where may I obtain reference to medical literature on iodine treatment of goitre? Thanking you,

——— ———, M. D.

Reply: Write to Cumulative Medical Index Dept. American Medical Association, 535 N. Dearborn St., Chicago.

Holland, Mich., Nov. 1, 1924.

Editor The Journal:

What is the date of the next Annual Meeting of the A. M. A., and where is the meeting place?

R. H. Nichols.

Reply: Week of May 25, 1925—Atlantic City, N. J.

A KIVER TO KIVER READER

The following is from a loyal member who clipped the ad, "Doctor, Give Us a Minute, Please."

Secretary-Editor: This is good stuff and here goes to show you one who reads The Journal from "Kiver to Kiver." Even enjoy the 100 per cent political travesty. More power to your pen.

Goering.

Cambridge, England, Oct. 23, 1924.

Editor The Journal:

We have recently acquired a copy of the Beaumont Foundation Lectures No. 2, under the English Copyright Act. This series will doubtless be of the greatest interest to Medical Students of this University, and I venture to ask if your Society will be good enough to present No. 1 to this Library, in order that we may preserve a complete set of the series here.

W. F. Cuthbertson, Secretary.

We tender congratulations to the Lectureship Foundation Committee of the Wayne County Medical Society upon this recognition. A standard has been created for these Beaumont lectures that commends the activity that the Committee has evidenced. We are afraid we in Michigan haven't quite appreciated that fact.

Big Rapids, Mich., Nov. 13, 1924.

Editor The Journal:

Can you give me any information regarding the Professional Underwriters of Grand Rapids, Michigan? They have had an agent in this locality recently and I would appreciate any information you can give me regarding their responsibility in issuing medical protective insurance. Thanking you for this favor, I am

Yours very truly,

G. H. Yeo.

Reply: Not endorsed or approved by The Council or our Medico-Legal Committee.

Come on, boys! Help put some more live stuff in these columns.

Deaths

Perry Schurtz, M. D., Grand Rapids, died on Nov. 17, 1924, from angina pectoris. Dr. Schurtz has been a resident practitioner of Grand Rapids since his graduation from the University of Michigan in 1876. He was a member of the Kent County Medical Society and the Michigan State Medical Society. For many years he was a member of the Grand Rapids Board of Health. As a surgeon he had early obtained a wide-spread reputation. For the past 10 years he had greatly limited his professional activities on account of failing health.

Dr. Carrol Lawrence Storey, Detroit, while duck hunting off Point Huron in Lake St. Clair, was drowned November 3rd, when his boat capsized in a stiff breeze. The doctor was hunting alone and about two hours after setting out his accident occurred.

Dr. Storey was born near Toledo 47 years ago, being the son of a physician. He received his pre-medical education at Oberlin College, graduating a Bachelor of Science at the age of 21. He then undertook the study of medicine, graduating from Rush Medical College, Chicago, in 1903. Following his graduation, he practiced a number of years at Whitehall, Wisconsin. Just before the World War he left for Harvard University to take up the study of orthopedics.

When the British call for American physicians came, Dr. Storey responded and served under Dr. Robert Jones of Liverpool for six months. He served overseas as a Captain in the Medical Corps of the United States Army and after returning was detailed for a time at the Walter Reed Hospital, Washington. Since coming to Detroit he has been associated with Dr. W. E. Blodgett at Grace Hospital and was the head of Sigma Gamma Civic Orthopedic Clinic. He also had charge of the orthopedic work at Northville Tuberculosis Sanitarium and the Nellie Leland School for Crippled Children. He is survived by his widow.

Dr. Moses Fechheimer, Detroit, was born in Detroit, July 30, 1875, and aside from the time spent in study of his specialty, was a life-long resident of the city. He died suddenly of Angina Pec-

toris early in the morning of November 4, 1924, at the Phoenix Club, Detroit.

His early education was obtained in his native city and he graduated from the Detroit College of Medicine and Surgery in 1899. After serving his interneship at St. Mary's Hospital, he was city physician from 1903 to 1905. He then decided to take up the specialty of urology and to perfect himself, spent a considerable time in study in Vienna and Berlin. For nearly twenty years he has followed his specialty in Detroit. He was genito-urinary surgeon to the United Jewish Charities. Besides his membership in the Wayne County Medical Society, the Michigan State Medical Society, and the American Medical Association, Dr. Fechheimer was a member of the American Urological Association and the Chicago Urological Society.

Dr. Fechheimer never married.

County Society News

IONIA-MONTCALM COUNTIES

The Ionia-Montcalm County Medical Society met Thursday evening, Oct. 9th, at Belding, Mich., with 26 members present.

Dinner was served at Hotel Belding, after which the following program was presented:

Subject: "Recent Developments in Nephritis." Speaker, Dr. Phil Marsh, Assistant Professor of Medicine at the University of Michigan, Ann Arbor. Dr. Marsh gave an exceedingly practical talk, brimfull of new ideas regarding the etiology and treatment of nephritis as carried out at the University hospital. The members present expressed themselves as being very grateful to Dr. Marsh for the scientific data presented to them.

Subject: "Infection of Kidney."

Speaker, Dr. Carl Eberbach, Assistant Professor of Surgery, University of Michigan, Ann Arbor. Dr. Eberbach presented the subject in a masterly manner.

1st. Differentiating between the medical and surgical kidney.

2nd. Definite bacteriological causes and their mode of transmission.

3rd. The selective action of certain organisms for a definite part of the kidney structure.

4th. Treatment of various types of infection of the kidney.

This talk was splendid, complete and concise. The lantern slides illustrating the talk made the presentation very clear and instruction.

F. A. JOHNSON, Secretary.

The November meeting of the Ionia-Montcalm Medical Society was held at Greenville, Thursday evening, Nov. 13th, 1924.

Dr. A. J. Bower, the retiring President, gave a complimentory dinner at his home at 7:30 o'clock to sixteen members and three guests, Drfl Richard Smith, Dr. Fred P. Currier, Grand Rapids, and Dr. L. E. Kelsey, Lakeview.

After the dinner, the guests were entertained by Dr. Richard Smith of Grand Rapids, who gave an illustrated talk on his recent trip to Havana, Australia, and New Zealand. This talk was intensely interesting and instructive and was listened to with profound attention.

Dr. Jos. Pinkham, Belding, Mich., gave his report as delegate to the Michigan State Society Meeting.

It was moved by Dr. J. R. Hansen and seconded to unanimously endorse the action of the House of Delegates in raising the annual dues from five dollars per year to ten. Motion carried.

Dr. Robert Haskell moved that the members present extend to Dr. and Mrs. A. J. Bower a vote of appreciation for the excellent dinner and the evening enjoyment. Seconded and unanimously carried. F. A. JOHNSON, M. D., Secretary.

GOGEBIC COUNTY

I a mpleased to submit the following report of our November meeting:

"The regular monthly meeting of the Gogebic Medical Society was held at Grand View Hospital, Ironwood, on Friday night, November 14. Dr. H. F. Ringo presented an interesting paper on "Pediatrics." The Society voted in favor of increasing the annual dues as recommended by the State Society. There were numerous X-ray pictures and laboratory specimens on display. Dr. M. H. Draper, and Dr. Oscar Harmos, both of Grand View Hospital, were voted into the Society at this meeting. Following the scientific program, lunch was served, after which the meeting adjourned."

The largest number of members of the year were present at the regular monthly meeting of the Gogebic County Medical Society, which was held at the St. James hotel, Ironwood, Friday evening, October 17. After enjoying an excellent dinner, various medical and scientific subjects were discussed. Following this the annual election of officers took place, with the following results:

President, Dr. T. S. Crosby, Wakefield.

Vice President, Dr. R. E. Hickey, Anvil.

Secretary-Treasurer, Dr. M. J. Lieberthal, Ramsay.

Delegate to State Convention, Dr. W. E. Tew, Bessemer.

Alternate, Dr. D. C. Pierpont, Ironwood.

The Gogebic County Sanitarium was decided upon as the place for the next monthly meeting.

M. J. Lieberthal, M. D., Secretary.

BERRIEN COUNTY

The Regular Monthly Meeting of the Berrien County Medical Association will be held at Niles, Thursday evening, November 20, 1924.

The following program will be given:

Dinner at Community House of Episcopal Church (cor. Fiftr and Broadway), 6:30 p. m.

Place of meeting: Dining room of Community House, 7:30 p. m.

"Cranial and Intracranial Birth Injuries," Norman F. Miller, M. D., Ann Arbor.

"Recent Additions to Our Knowledge of Chronic Nephritis," Phil L. Marsh, D. D., Ann Arbor.

Plans are being made to have several physicians from outside the County to lead the discussion of these papers.

After one look at the above program it will not be nceessary to urge anyone to attend this meeting. Dr. Miller is associated with Dr. Reuben Peterson in Ann Arbor and so he will need no further introduction to the Society. Dr. Marsh is from the Department of Medicine and we can be assured that he i swell qualified to present the subject that he has chosen.

We earnestly hope that there will be a large crowd present to greet these guests and give them a rousing reception. To all those who have attended meetings at the Episcopal Community House it is unnecessary to remind of the excellence of their dinners.

Receiving a copy of this program is an invitation to attend this meeting.

R. B. MOWARD, Secretary.

MONROE COUNTY

The annual meeting for elections of officers of the Monroe County Medical Society was held at the Park Hotel, Tuesday, October 21. At 6 p. m., the following doctors sat down to dinner: W. C. Ocker, C. T. Southworth, Varnum Southworth, F. C. Thiede, Jas. Humphrey, C. J. Golinvaux, J. J. Siffer, G. B. McCallum, H. W. Landon, all of Monroe, and Dr. W. B. Wickham of Detroit.

The meeting was called to order after dinner by President Landon and the following officers elected for the coming year:

President, E. S. Cornwall, LaSalle.
Vice President, Jas. Humphrey, Monroe.
Secretary-Treasurer, F. C. Thiede, Monroe.
Delegate to State Society, H. W. Landon, Monroe.
Alternate to State Society, C. T. Golinvaux, Monroe.
Medico-Legal Committee, C. T. Southworth, Monroe.

The secretary-treasurer's report was read and accepted. We also listened to report of Dr. Southworth, our delegate to the State convention.

It was moved that we increase our County dues from one dollar to two dollars a year, and with the ten dollars State dues, each member will pay twelve dollars for the coming year.

The application for membership of Dr. Varnum Southworth, a recent graduate of the Detroit College of Medicine, was read and Dr. Southworth was elected to membership. He will practice in Monroe with his father, Dr. C. T. Southworth.

We also listened to a talk from Dr. W. B. Wickham of Detroit on Tuberculosis. The doctor has charge of the monthly tuberculosis clinic, recently established in Monroe.

F. C. Thiede, Secretary.

HOUGHTON COUNTY

The Houghton County Medical Society held its regular monthly meeting at the Calumet high school, Tuesday, November 4th, at 8:30 p. m.

Dr. W. T. S. Gregg of the Calumet & Hecla staff, assisted by Mr. T. Jones, who operated the machine, presented the lantern slides of X-ray in Medicine and Surgery and read the explanation of the slides as furnished by Dr. P. M. Hickey.

The slides were loaned by the University of Michigan through the kindness of Dr. P. M. Hickey, and the Society takes this opportunity of thanking Dr. Hickey and the University for the slides, which were thoroughly enjoyed by all.

A very free discussion was held of the various slides and conditions to which they refer by all present. The Society then adjourned to lunch at the Miscowaubik club.

G. C. Stewart, M. D., Secretary.

ST. CLAIR COUNTY

The members of the St. Clair County Medical Society, on October 9th, tendered Dr. C. C. Clancy, new President of the Michigan State Medical Society, a banquet at the Hotel Harrington.

There were several out of town guests for the evening, including Dr. Angus McLean of Detroit, Dr. Harry Dibble of Detroit, and Dr. O'Reilly of Saginaw.

Dr. Theodore Heavenrich was the toastmaster of the evening, Dr. McLean and Dr. Clancy being the speakers.

Howard O. Brush, Secretary.

Among the Books

A Review and Frank Appraisal of Medical Books That are Proffered to the Profession by Publishers.

OPERATIVE SURGERY. Covering the operative technic involved in the operations of general and special surgery. By Warren Stone Bickham, M. D., F. A. C. S. In six octavo volumes, 5,400 pages, 6,378 illustrations and separate index volume. Cloth $10.00. W. B. Saunders Company, Philadelphia.

Our readers will eagerly welcome this fifth volume of a set of six that composes our most modern and dependable system of operative surgery. In this volume the standard of the four previous books is not only maintained, but enhanced. It deals with operations on the colo-rectal-anal tract, kidneys, ureters, bladder, urethra, male generative organs and vessels. Splendid illustrations abound through the text and elucidate most clearly the descriptive procedures. The obsolete and impracticable is happily relegated to the scrap heap. You seek and find what you want and it proves to be the best. We repeat, the system is a monumental accomplishment.

DEVELOPMENTAL ANATOMY, A Text Book and Laboratory Manual of Embryology, by Leslie B. Arey, Northwestern Medical School, Chicago.. Octavo vol. of 433 pages, 419 illustrations. Cloth, $5.50 net. W. B. Saunders Company, Philadelphia.

While essentially a text for students, it is a work of merit for everyone who is interested in man and his anatomical development. It should find a place in every modern laboratory.

HUMAN CONSTITUTION—A Consideration of Its Relationship to Disease, by George Draper, M. D. Octavo of 345 pages, 208 illustrations and 105 tables. Cloth, $7.50 net. W. B. Saunders Company, Philadelphia.

The object sought by the author is to present dependable methods of morphological study, the demonstration of the inadequacies of present observations and descriptive procedures, and finally to encourage interest in the study of the human constitution. This volume is the first one of a proposed series. It is a text that should be available to every hospital interne and would enable him to write more valued physical records. The author merits healthy support in this contribution and effort to bring about the ends announced as the basis of his monograph.

A MANUAL OF THE DISEASES OF THE NOSE, THROAT AND EAR, by E. B. Gleason, M. D. Fifth edition, revised. 12 mo. of 660 pages, 212 illustrations. Cloth, $4 net. W. B. Saunders Company, Philadelphia.

This splendid manual is of value to students, but of especial value to practitioners. It supplies them with the essential facts of the subjects covered. It serves as a splendid guide to them in the first recognition and management of these special diseases and enables them to institute intelligent modern treatment. It is most complete and forms a quick reference that is wholly dependable and modern. With it at hand there is no excuse for the average man to go very far wrong on this type of cases.

THE PRESCRIBING OF DIETS—A book of importance, with dietetically correct recipes with Gelatine, for Diabetes, Nephritis, high blood pressure and general mal-nourishment in infants and adults. Mailed postpaid and free of charge by the Charles B. Knox Gelatine Company, Johnstown, New York, to any physician or dietician on request.

The dietetic importance of pure, plain, granulated gelatine has attracted so much attention, and the de-

mand for more information has reached such a volume that the laboratories of the Charles B. Knox Gelatine Company have prepared a book of dietetically correct recipes with gelatine, for diabetes, nephritis, high blood pressure, gastritis, gastro intestinal disorders, fevers, constipation, obesity, and general mal-nourishment in infants and adults.

The recipes have been most carefully worked out under authoritative auspices, and with each recipe is given a quantitive analysis of carbohydrates, fat, protein and calory value.

The diabetic section of the book is a most valuable contribution to advanced dietetic practice, with or without the insulin treatment. Another important chapter is the report of T. B. Downey, Ph. D. Fellow at Mellon Institute (Pittsburgh), on the value of pure, unflavored gelatine as a protective colloid in the modification of milk in infant feeding, which in no way changes prescribed formulas. Dr. Downey has determined, by standard feeding tests, that the addition of 1 per cent of gelatine to a quart of milk, increases the yield of nourishment by about 23 per cent.

Furthermore, these feeding tests determined that the protective colloidal action of the gelatine was highly efficacious in aiding the complete digestion and resulting assimilation of other basic foods of the vegetable, fruit, meat and fish families.

A most important feature of this book is the simple and complete directions for the preparation of these dishes, without which a prescribed diet so often fails despite the care and caution of the physician.

ESSENTIALS OF PRESCRIPTION WRITING, by Cary Eggleston, M. D. Third edition, revised, 32 mo. of 146 pages. Cloth, $1.50 net. W. B. Saunders Company, Philadelphia

A valuable manual—covering the field set forth on the title page.

THE NEW METHOD IN DIABETES, J. Harvey Kellogg, M. D., Battle Creek, Mich. Modern Medicine Publishing Co., Battle Creek, Mich.

This third edition forms a text, or rather manual of wholesome information and advice. It tells in plain language what every competent physician tells his patient, but which they all too soon forget. It's a manual that you can advise your patient to secure and observe. It will instruct them as to diet, food values and intestinal hygiene and will enable them to reap the full benefits of the modern treatment of diabetes. Especial mention should be made of the many food formulas given and the food value of each. These recipes for diabetic dishes are most useful and enhance the text.

A TEXT BOOK OF MATERIA MEDICA FOR NURSES. A. L. Muirhead, M. D. and E. P. Brodir, R. N. Second Edition. Price $2.00. C. V. Mosby Company, St. Louis, Mo.

A compact, dependable quide and teacher for the student nurse. It obviates the confusion of endeavoring to obtain essentials by wading through a large text. Our training schools will do well to adopt this admirable text.

MEDICAL CLINICS OF NORTH AMERICA—(Chicago Nnmber, (Issued Serially), Volume VIII, Number 11. Octavo of 273 pages, 24 illustrations. Paper $12.00; Cloth $16.00. W. B. Saunders Company, Philadelphia.

Books and Journals must comprise the source of one's personal reading and study. They, however, cannot impart facts and practical application of principles effectively in all instances. We have long been of the opinion that a well written, well discussed clinical case affords opportunity for effectively presenting certain essentials and principles. These clinics fill that purpose. That is why they are so valuable. It is also the reason why we approve and recommend these clinics. Every man in medicine should include them in his study and reading. The present number maintains the high standard that has been established for them.

MEDICAL RECORD, VISITING LIST AND DIARY. Price $2.00. Wm. Wood Company, Philadelphia.

The handy, useful pocket record contains many valuable ready references and memoranda. It is of value in keeping one's engagements and call records.

PATHOGENIC MICROOGRANISMS. W. H. Park, M. D.; A. W. Williams, M. D.; C. Krumweide, M. D., all of the University of Bellevue. Cloth, 807 pp. Price $6.50. Lea & Febiger, PPhiladelphia, Pa.

The eighth edition of this recognized text maintains the excellency of former editions and so continues as an authoritative text. It contains the terminology adopted by the American Society of Bacteriologists and the grouping of microorganisms are so arranged. Of special merit is the discussion of immunization and the value of serums and vaccines. So to is the information regarding recent new facts pertaining to Scarlet fever, measles and typhoid fever.

To be possessed of the latest and recognized facts one cannot overlook this modern text that is so complete in desired detail. It belongs upon the desk of all students and progressive practitioners as well as specialists.

SAFEGUARDING CHILDREN'S NERVES. A handbook of mental health by James J. Walsh, M. D., and John A. Foote, M. D., with a foreword by Herbert Hoover. Price $2.00. J. B. Lippincott Company, Philadelphia.

A handbook of mental health in children for mothers, nurses, social workers, teachers and others dealing with the problems of child care and training. It answers many questions put to physicians by parents. It is practical and sane and can be recommended to the parent and guardian in confidence. It may aid in the better supervision of the growing child.

BASAL METABOLISM IN HEALTH AND DISEASE. E. F. DuBois, M. D., Russel Sage Institute. Cloth, price $4 75, 372 pp. Lea & Febiger, Philadelphia.

For one desiring more practical application of the principles of basal metabolism this text will be found reliable and informative. It sets forth this information in a readily understandable manner and is void of the speculative theories that confuse. We commend it to the man in general practice.

ABT'S PEDIATRICS—(Volume IV), by Isaac A. Abt, M. D., Northwestern University Medical School, Chicago. Eight octavo volumes totalling 8,000 pages with 1,500 illustrations. Cloth, $10.00. W. B. Saunders Company, Philadelphia.

The subjects discussed in this volume of Abt's Pediatrics, cover all that is worth while about them in a thorough manner. A possibly strong statement, but it is made following a diligent purusal of the text. Special emphasis of appreciation is recorded for the chapters devoted to the lungs and heart. It is a text pleasing to read and in which facts and principles are expressed in a manner that sets forth their relative merit in logical order of importance. We commend again the previous volumes and this one for they present modern pediatrics in a light that represents all that we know about the subject.

INDEX

VOLUME XXIII, JANUARY TO DECEMBER, 1924.

O. Original. E. Editorial. A. Abstract.
Misc. Miscellaneous.

A

Page

Acites, Report of Several Interesting Cases. C. R. Hills ..... O. 225
Acrodynia. Stanley Griffin ..... O. 8
Acrodynia, Case of. David E. Squires ..... O. 323
Actinomycosis in Man. Frederick A. Caller, George C. Addie ..... O. 367
Acute Vomiting in Infants and Children, the Treatment of . David J. Levy ..... O. 6
Advanced Cancer of the Cervix Treated with Heat and "Starvation Ligature." G .Van Amber Brown ..... O. 520
Anterior Poliomyelitis Complicating Pregnancy, with Report of Two Cases. Norman F. Miller ..... O. 58
Annual Meeting Program 335
Arthritis, Non-Specific Protein Therapy. A. F. Peterson ..... O. 53
Automobile Battery Burns of the Eye and Adnexa with Report of Two Cases. Norman F. Miller ..... O. 58

B

Bismuth in the Treatment of Syphilis. A. E. Schiller ..... O. 235
Blood Coagulation. A. Max Kohn ..... O. 152
Blood Transfusion. George E. White ..... O. 147

BOOK REVIEWS—

Abt's Pediatrics, Vol. IV. Isaac A. Abt., M. D. 568
A Manual of the Disease of the Nose, Throat and Ear. E. B. Gleason, M. D. 567
American Illustrated Medical Dictionary, (Dorland), 12th Edition. W. A. Newman Dorland ..... Feb. XVI
Anatomy of the Nervous System. Stephen W. Ranson XXV
Anesthesia. James Taylor Gwathmey 348
Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1923 296
Applied Bacteriology fro Nurses. C. F. Bolden ..... Jan. XIX
Basal Metabolism. E. F. DuBois 568
Bibliography of Internal Secretions. F. X. Dercum ..... April XVIII
Care of the Baby, The. J. P. C. Griffith ..... Jan. XIX
Chemical Dynamics of Life Phenomena. Otto Meyerhof 452
Children's Diseases for Nurses. W. P. Lucas ..... Feb. XVII
Circulatory Disturbances of the Extremities. Lee Buerger 275
1923 Collected Papers of the Mayo Clinic 348
Developmental Anatomy. L. B. Avery 567
Diagnostic Methods. H. F. Brooks ..... Jan. XIX
Different Diagnosis. Richard C. Cabot 275
Diseases of the Breast. Wilmott H. Evans XXV

Page

Diseases of the Eye. Geo. E. De Schweinitz ..... Nov. 500
Diseases of the Chest and the Principles of Physical Daignosis. George U. Norris, Henry R. M. Landis XIV
Diseases of the Skin. R. L. Sutton ..... Jan. XIX
Dislocations and Joint Fractures. F. J. Cotton XXV
Dosage and Solutions. G. E. Garnsey ..... Apr. XIX
Essentials of Prescription Writing. E. Eggleston 568
Fertility and Sterility in Human Marriages. Edward Reynolds 348
Five Volumes of the 20-Volume National Health Series 276
Fundamentals of Human Physiology. R. G. Pearce, J. J. R. McLeod ..... Nov. 500
Geriatics. M. W. Thewlis ..... March XVIII
Genito-Urinary Diseases and Syphilis. Henry H. Marton ..... March XVIII
Goitre—Nonsurgical Types and Treatment. I. Bram 348
Hernia—Its Anatomy, Etiology, Symptoms and Diagnosis. L. F. Watson ..... Mar. XVIII
Hospital Organization and Operation. Frank E. Chapman, Joseph J. Weber XXV
Human Constitution. G. Draper 567
Human Testis. Max Thoreck XXV
Internal Secretions. Arthur Weil 348
International Clinics, IV, 33rd Series ..... Feb. XVI
International Clinics, Vol. I, 3dth Series ..... Apr. XVIII
Introduction to the Study of Mental Disorders. F. M. Barnes ..... Jan. XVIII
Life Insurance Examinations. F. W. Foxworthy ..... Nov. 500
Management of Diabetes. Geo. A. Hamp 276
Management of Sick Infant. Langley Porter ..... March XVIII
Manual of Diseases of the Eye. C. H. May ..... Oct. 452
Manual of Histology. H. E. Radasch XXV
Materia Medica for Nurses. A. L. Muirhead 568
Medical Clinics of North America 568
Medical Clinics of North America—May XXV
Medical Clinics of North America—Nov.— Vol. XIII 348
Medical Clinics of North America—Jan. XIX
Medical Clinics of North America—
Medical Department of the U. S. Army in World War ..... Jan. XVIII
(St. Louis, Mo.) April XIX
Medical Gynecology. S. Willis Bandler ..... Oct. 452
Medical and Veterinary Entomology.
Medical Record, Visiting List and Diary 568
W. B. Herms ..... Feb. XVI
Methods in Medicine. George Doek ..... Apr. XVIII
Modern Methods of Treatment. L. Clendening 348
Neurologic Diagnosis. Loyal E. Davis ..... Feb. XVII
Operative Surgery. Warren Stone Bickham XXV
Operative Surgery. Warren Stone Bickham ..... Feb. XVI

Page
Operative Surgery. W. S. Bickham, M. D. 567
Obstetrics for Nurses. J. B. DeLee....Apr XIX
Pathogenic Microgramisms. W. H. Park 568
Pathological Technique. F. B. Mallory and J. H. Wright....Oct. 452
Physical Exercises for Invalids and Convalescents. E. H. Ashsuer....Mar. XVIII
Practical Chemical Analysis of Blood. V. C. Meyers 275
Practical Electrotherapeutics and Diathermy. G. B. Massey....Mar. XVIII
Practical Textbook of Infection, Immunity and Biologic Therapy. John A. Kalmer .... Jan. XIX
Principles and Practice of Obstetrics. Joseph B. DeLee....Oct. 452
Rhus Dermatitis. J. B. McNair....Jan. XIX
Safeguarding Children's Nerves. J. J. Walsh 568
Science and Art of Anesthesia. Wilhan Webster XXV
The New Method in Diabetics. J. H. Kellogg 568
The Prescribing of Diets.... 567
Treatment of Commercial Disorders of Digestion. J. L. Kartoo....XXV
Textbook of Psychiatry. Prof. Eugene Bleuler .... Apr. XVIII
Brain, Acute Traumatic Injuries of. H. E. Randall ....O. 20

C

Carcinoma of the Large Intestine. C. Brooks..O. 294
Chronic Intestinal Indigestion. William S. O'Donnell ....O. 56
Clinical Alkolosis in Gastric Diseases. John B. Youmans, I. W. Green....O. 160
Clinical Cases ....O. 24
Clinical Significance of Jaundice. M. A. Blankenhorn ....O. 539
Clinical Types of Goitre with Special Reference to the Adenomatous Type, with Demonstration of Cases. Henry L. Vanden Berg ....O. 37
Committees for 1925....O. 493
Constitution and By-Laws, Committees Draft Proposed, New.... 306
Constitution and By-Laws of Michigan State Medical Society 479
Council Committees 448
County Secretaries' Conference 243
Correspondence 85, 134, 187, 271, 318, 344, 395, 450, 495 561.
Among Our Letters 565

COUNTY SOCIETIES—

Bay 138
Berrien 138, 566
Calhoun 86, 137, 322, 452, 498
Clinton 88
Fifth Councilor District.... 322
Genesee 36, 138, 190, 321, 348
Gogebic 566
Gratiot-Isabella ....XVIII, 137, 275, 321
Hillsdale 88, 224, 347
Houghton.... 36, 138, 190, 274, 321, 348, XIV, 498, 567.
Ionia-Montcalm 87, 275, 321, 347, 499, 566
Ingham ....452, XVIII, 138
Jackson 224
Kalamazoo 138
Kent 36
Monroe 567
Newaygo 275
Sanilac 88
St. Clair 88, 567
St. Joseph 87
Washtenaw 190

D

Diabetes Mellitus in a Child Treated with Insulin, A Case of. J. C. Montgomery....O. 23
Deep X-Ray Therapy in Malignancies of the Cervix and Uterus—Preliminary Report. Clyde K. Hasley....O. 113
Diet in Anemia of Infancy and Childhood, The. B. Raymond Hoobler....O. 150
Drive of Civilization, Disease and Decadence, The. Joseph Rilus Eastman....O. 503
Dropper Suction Treatment of Discharging Ears. S. E. Barnett....O. 234
Dry Clinic—Section on Ophthalmology, and Dry Clinic, Oto-Laryngology....O. 67
Dystocia Due to Fatal Causes. George Kamerman ....O. 49
Dystocia Resulting From Pathology of the Soft Parts of the Generative Tract. Walter Manton ....O. 103
Deaths....86, 136, 189, 274, 320, 396, 451, 498, 565

E

Enlargement of the Thymus Gland with Report of Cases. Faith Francis Hardy.... O. 40
Enterostomy, The Value of. C. D. Brooks, W. R. Clinton ....O. [illegible]
European Impressions. W. J. Stapleton, Jr.....O. 10
Editorials
29, 81, 127, 183, 219, 266, 312, 340, 393, 448, 49[illegible] 552.
Editorial Comments
32, 83, 182, 186, 222, 269, 317, 343, 393, 448, 493, 5[illegible]

F

Four Months Through Europe With a Physio Therapeutist. J. E. G. Waddington....O. 43

G

Gastric Obstruction. S. Emerson Vreeland..O. 155
Giardia Intestinal. J. B. Jeffrey....O. 303

H

Hemolytic Jaundice. Charles D. Aaron....O. 513
Henoch's Purpura, Report of a Case. W. C. Cole ....O. 4
History of Homeopathy in the University of Michigan. C. B. Kinyon....O. 349
Hospital and the Interne. G. L. LeFevre....O. 399

I

Important Factors Influencing the Medical Practice of Today. E. L. Eggleston....O. 527
Industrial Medicine. A. M. Shaeffer....O. 204
Insufflation of the Fallopian Tubes in Its Relation to the Sterility Problem. Harold Henderson, T. G. Amos....O. 61
Intrathoracic Goitre. Simon Levin....O. 208
Iodized Salt, Report of the Committee of the Pediatric Section, Michigan State Medical Society ....O. 173
Infantile Tetany with Report of a Case. E. P. Russell ....O. 509

J

Joint Committee on Public Health Education 499

Page

L

Laparohysterotomy in the Early Months of Gestation. Reuben Peterson.....O. 376
Lethargic Encephalitis. Charles W. Heald....O. 407
Local Anesthesia. H. S. Collisi.....O. 91

M

Mastoid Case with Complications. Carl F. Snapp .....O. 99
Menstruation and Its Disorders at Puberty and Early Adolescence. George Maxwell Brown .....O. 15
Method of Holding the Septal Membranes in Opposition After a Submucous Resection Without Use of Packing. A Description and Demonstration of the Instruments and the Method of Use. H. Lee Simpson .....O. 64
Minutes of the Meeting of the Joint Committee on Public Health Education, Oct. 6, 1924 .....O. 499
Modern Health Education in the Public Schools. A. P. Biddle.....O. 139
Mt. Clemens Meeting, The..... 442

N

w Constitution and By-Laws..... 443
w Members of the Council..... 443
rsing, The Essential Interdependence of. Hugh Cabot .....O. 191

O

bservations on General Infections by Bacteria. E. Libman.....O. 462
stetrics 447
tetrical Analgesia and Anesthesia—An Evaluation of Various Methods. Carl Henry Davis, Roland S. Cron.....O. 517
Official Minutes of the Annual Meeting..... 414
Operative Obstetrics 491
Original Articles 443
Osteomyelitis. Leo Dretzka.....O. 462
Our Society Business and Activities..... 563

P

Pathological Action of the Uterus As a Cause of Dystocia. Theodore W. Adams.....O. 108
Paralysis Following Diphtheria. John Garvey..O. 364
Pending Michigan State Income Tax, Constitutional Amendment Is a Monstrosity That Must Be Defeated..... 445
Peptic Ulcers: Certain Factors to be Considered in Prognosing Cure of. Frank Smithers .....O. 121
Points of Interest Relative to the Education and the Lives of the Hard of Hearing. W. G. Bird.....O. 401
Polyneuritis in Children With Report of Cases: Acute Infective. H. B. Mettell....O. 47
Practical Significance of the Functim and Anatomy of the Base of the Cranium and Cranial Nerves in the Practice of Otology, Phythlalmology and Rhinology. C. F. McClintic.....O. 194
Precancerous Cervix, The. Nathaniel Ginsburg .....O. 98
Pregnancy With Preliminary Report of Phloridzin Test Cases, The Early Diagnosis of. L. W. Haynes.....O. 215
Preliminary Report on the Value of Ethylene as a General Anesthetic Based on the Study of 500 Cases. Hugh Cabot, Laura B. Davis .....O. 372
President's Annual Address—Twenty-Fifth Anniversary of The Michigan State Board of Registration in Medicine. Guy L. Connor .....O. 397
President Charles C. Clancy..... 444
President's Message, Our..... 484
Preventative Medicine, Fundamentals In. Arthur F. Fischer.....O. 322
Problem of the Physician's Relation to the Public, The. William D. Haggard.....O. 410
Proctology, Impression on European. Louis J. Hirschman .....O. 1
Psychoneuroses, Some Notes to Definition and Treatment. Thomas J. Heldt.....O. 121
Public Health. Emil Amberg.....O. 46
Pyogenics Granulama of Ethmoid Ulcerating Into Orbia. Herman Grant.....O. 116

R

Resuscitation From Electric Shock. W. L. Finton .....O. 544
Retrobulbar and Intraocular Neuritis Due to Hyperplastic Changes in the Ethno-Sphenoid Sinuses. J. M. Sutherland.....O. 279

S

Sarcoma of the Mediastinum. J. A. Jeffrey....O. 95
Simmons, Dr. George Henry..... 485
Smith, Harvey George, Introducing, Executive Secretary 485
Streptococcus Viridans Bacteraenious, The Prognosis In. F. Janney Smith.....O. 41
Studies in the Technic and Clinical Application of Sex Gland Transplantation. Max Thorek .....O. 532
Study of the Diagnostic Criteria of Duodenal Ulcer, A. John G. Mateer.....O. 329
Syphilitic Aortitis. W. H. Marshall.....O. 324
State News Notes
35, 85, 135, 187, 224, 273, 319, 346, 395, 451, 496, 561

T

Traumatic Neurosis and Their Relation to the Surgeon, The. F. P. Currier, R. H. Denham .....O. 299
Treatment of Advanced Cancer of the Uterus with Heat and "Starvation Ligature." G. Van Amber Brown.....O. 200
Treatment of Chronic Nephritis, The. L. M. Warfield .....O. 377
Trip to New Zealand and Australia. Richard R. Smith.....O. 240
Thrombo-Angilitis Obliterans. Willard D. Mayer .....O. 237
Thymus, Report of a Few Cases With Enlarged. John Parsons .....O. 117
Tuberculosis Glands, Diagnosis and Treatment of. W. S. O'Donnell.....O. 144
Twenty-Fifth Anniversary of the Michigan State Board of Registration in Medicine. Guy L. Connor.....O. 397

V

Von Jaksch's Disease, Anemia Infantum Pseudo-Leukemia. Charles A. Wilson....O. 145

W

Why Increase of Dues.....O. 439

Page

X

Xanthoma Diabeticorium, Its Response to Insulin Treatment. Question of Familiar Tendency, Report of Cases. William H. Gordon, Milton S. Feldman ..... O. 231

INDEX TO AUTHORS

A

Aaron, Charles D. ..... O. 513
Adams, Theodore W. ..... O. 108
Adie, George C. ..... O. 367
Amberg, Emil ..... O. 46
Amos, T. C. ..... O. 61

B

Barnett, S. E. ..... O. 234
Biddle, A. P. ..... O. 139
Bird, W. G. ..... O. 401
Blankenhorn, M. A. ..... O. 539
Brooks, C. D. ..... O. 3
Brooks, C. ..... O. 294
Brooks, C. D. ..... O. 471
Brown, G. Van Amber ..... O. 520

C

Cabot, Hugh ..... O. 191
Cabot, Hugh ..... O. 372
Caller, Frederick A. ..... O. 367
Clinton, W. R. ..... O. 3
Cole, W. C. C. ..... O. 4
Collisi, Harrison S. ..... O. 91
Connor, Guy L. ..... O. 397
Cron, Roland S. ..... O. 517

D

Davis, Carl Henry ..... O. 517
Dretzka, Leo ..... O. 291

E

Eastman, Joseph Rilus ..... O. 503
Eggleston, E. L. ..... O. 527

F

Feldman, Milton S. ..... O. 231
Finton, W. L. ..... O. 544
Fischer, Arthur F. ..... O. 332

G

Giffin, Stanley ..... O. 8
Ginsberg, Nathanial ..... O. 98
Grant, Herman ..... O. 116
Green, I. W. ..... O. 160
Gordon, William H. ..... O. 231

H

Haggard, William D. ..... O. 410
Hardy, Faith Frances ..... O. 403
Hasley, Clyde ..... O. 113
Haynes, L. W. ..... O. 215
Heald Charles W. ..... O. 407
Held, Thomas J. ..... O. 121
Henderson, Harold ..... O. 61
Henderson, W. G. ..... O. 474
Hills, C. R. ..... O. 225
Hirschman, Louis J. ..... O. 1

Page

J

Jeffrey, J. A. ..... O. 95
Jeffrey, J. B. ..... O. 303

K

Kamperman, George ..... O. 49
Kinyon, C. B. ..... O. 349
Kohn, A. Max ..... O. 152

L

Le Fevre, George L. ..... O. 399
Levin, Simon ..... O. 208
Levy, David J. ..... O. 6
Libman, E. ..... O. 462
Lockwood, Bruce C. ..... O. 458
Loree, Maurice C. ..... O. 292

M

Mahaney, R. C. ..... O. 454
Manton, Walter ..... O. 103
Marshall, W. H. ..... O. 324
Mateer, John G. ..... O. 327
Mayer, W. D. ..... O. 237
Mittell, H. B. ..... O. 47
Miller, Norman F. ..... O. 58
Montgomery, J. C. ..... O. 23
McClintic, C. F. ..... O. 194

O

O'Donnell, William S. ..... O. 56
O'Donnell, William S. ..... O. 144

P

Parsons, John P. ..... O. 117
Peterson, W. F. ..... O. 53
Phemister, D. B. ..... O. 468

R

Randall, H. E. ..... O. 28
Russell, E. P. ..... O. 509

S

Shaeffer, A. M. ..... O. 204
Schiller, A. E. ..... O. 235
Smith, Richard R. ..... O. 240
Smith, F. Janney ..... O. 41
Smithe[illegible] ..... O. 163
Snapp, [illegible] ..... O. 99
Squires, David E. ..... O. 323
Stapleton, W. J., Jr. ..... O. 100
Sutherland, J. M. ..... O. 279

T

Thorek, Max ..... O. 532

V

Vanden Berg, Henry J. ..... O. 453
Vanden Berg, Henry L. ..... O. 37
Vreeland, S. Emerson ..... O. 155

W

Waddington, J. E. G. ..... O. 43
White, George E. ..... O. 147
Wilson, Charles A. ..... O. 145

Y

Youman, John B. ..... O. 160

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